

**NEED
FOR
AN
AIRCRAFT
POLICY**

See Page 2



"THE TIMES" OF THE TRANSPORT WORLD

VOL. LXXXI No. 2092

[Registered at the G.P.O.
as a newspaper]

LONDON, MAY 2, 1959

**NEW
TYPE 4
B.R.
DIESEL
LOCOMOTIVE**

See Page 3

PRICE NINEPENCE

New Chairman of London Transport

THE Minister of Transport has acted wisely—though not surprisingly—in choosing Mr. A. B. B. Valentine to succeed Sir John Elliot as chairman of the London Transport Executive. The appointment, which is to date from July 1, will run concurrently with the term of Mr. Valentine's membership of the British Transport Commission to December 31, 1962, and the salary will be £7,500 as at present. To our mind three main qualifications are essential for this post—wide transport experience, a flair for negotiation, and an aptitude for public relations. In these fields the chairman-designate, who was featured in our middle-page portrait series on April 4, has proved his worth. Joining the staff of the London Underground group under the late Mr. Frank Pick in 1928 he was appointed a full-time member of the L.T.E. on its formation in 1948. Meanwhile he had been engaged on both the commercial and operating sides and had reached the dual position of chief commercial officer and operating manager of the railways. Since becoming a member of the Commission in 1954 his duties have included representation of the Commission before the Transport Tribunal and National Wages Board; moreover, after leaving Oxford with an Honours Degree in 1922 he was engaged for six years in publicity and public relations with the Commercial Gas Association; so all three requirements have been met. It is gratifying that Mr. A. H. Grainger, deputy-chairman of the L.T.E., to whom Sir John Elliot has frequently paid tribute for the smooth running of the administrative machine, will become also managing director, an arrangement which should enable the new chairman to devote the requisite time and attention to his membership of the B.T.C.

Executive and Commission

IT will be recalled that in an exchange of letters during March between Sir John Elliot and Sir Brian Robertson regarding the former's impending retirement the chairman of the B.T.C. suggested that the formal relationship between London Transport and the Commission could admit the possibility of friction between the two organisations and remarked: "I am very grateful to you for the fact that during these nearly six years in which you have been chairman of the executive there has been complete harmony between us." This seemed to point to the possibility of a closer link between the two bodies, and the pros and cons were discussed in an editorial note in our issue of March 21. This link will in fact be forged on assumption by Mr. Valentine of his new appointment. This may be all to the good: a similar arrangement applies to the chairmanships of the Area Boards and appears to be working well. The assumption by Mr. Grainger of day-to-day managerial responsibility connoted by the addition of "managing director" (despite the absence of other directors as such) to his title indicates official recognition of the special task of the London Transport Executive; the chairman should, besides pursuing his B.T.C. duties, have leisure to ponder L.T.E. policy, without the distractions of routine matters; further, he should have the time to provide the public figure, with perhaps an "Aunt Sally" assailability, that Londoners expect of the L.T.E. chairman. Already the Press have taken Mr. Valentine's Christian names to heart—a good sign. The new set-up had its parallel in the past in Lord Ashfield as chairman and Frank Pick as managing director of the Underground group; in the railway regions it is in many ways comparable to the area board chairman and regional general manager relationship. In wishing the new chairman well we offer the retiring occupant our congratulations on his many achievements during what must have been a most difficult and strenuous period of office. Certain it is that wide endorsement will be given to the "tribute to the great service" rendered by Sir John to the L.T.E. which the Minister of Transport paid when announcing the new appointment in the House of Commons. Sir John's welcome to his successor and appreciation of the new team appears on page 15.

The L.T.E. Task

THE chairman-designate of London Transport has already indicated his views on some of the ideals that body should pursue. It was, of course, essential that there should be constant reappraisal of the best techniques in meeting the continuously changing pattern of public demand. An avowed admirer of Lord Ashfield and Frank Pick, who "achieved a remarkably high proportion of right judgments" in building the organisation up to its high state of efficiency, Mr. Valentine added that policies which were correct then might no longer be

Good Driving Points

SPEED is also one of the points included in the first five of the code of 20 points of good driving which, as we recorded last week, the Ministry of Transport plans to issue during the current Be a Better Driver Campaign. The five points published on Monday this week cover concentration, courtesy, care of pedestrians, speed and overtaking, and it is a sad reflection on human nature that a tendency to lapse from standards of ordinary considerate behaviour once behind the wheel should make it necessary periodically to reissue these fundamental

hours should take precedence over wage claims; but if there was a significant increase in living costs they would immediately take the necessary steps to protect members' living standards." There is sense and moderation in this attitude, but even shorter working hours must depend on increased productivity if they are not to be used as a means of increasing earnings. The employers, whose recent booklet on industrial relations Mr. Carron deplored, will no doubt require some understanding on this point.

The Crewe Tradition

THE 52nd annual dinner of the Crewe Pupils and Apprentices Association was held on April 24 under the chairmanship of Mr. Kenneth Cantlie. Proposing "Past and Present Crewe Men," Mr. A. E. Robson, chief mechanical and electrical engineer, London Midland Region, British Railways, said that the body was a unique association, founded over 70 years ago. Training today was much more expensive than of yore. The B.T.C. and the area boards took great interest in it and it was nice to think that future chief mechanical engineers were sitting round the table. Although the last steam engine had been turned out of Crewe, Crewe was by no means finished. They had complete faith in modernisation of equipment and thought. Crewe would still be in the forefront with electric and diesel traction and the apprentices and students at Crewe could look forward with great confidence to the future. Mr. R. C. S. Low, acting works manager, Horwich, replied on behalf of past Crewe men and referred to the fine tradition of the works over the years. The sentiments of the present Crewe generation were reflected by Mr. P. Baker, who said that some thousand apprentices were being trained in engineering there—and what better place was there to be trained in? Mr. Kenneth Cantlie welcomed the guests and Mr. R. Arbuthnott, president of the Institution of Locomotive Engineers, said that the Crewe dinner had always seemed—from an envious and respectful distance—the highlight of the year. Membership of that exclusive club was the hallmark of standing in the locomotive world. "When I served my time at a locomotive works," he said, "my education was not considered complete until I had paid a visit to Crewe."

Use of an Informal Occasion

USE was made by the Joint Parliamentary Secretary, Ministry of Transport, Mr. G. R. H. Nugent, of an informal occasion in the shape of the Institute of Transport luncheon in London on April 28 to express what he emphasised were personal views on transport and its future. He felt it proper to do so because he was talking to those who had it in their power to bring their views to the Ministry of Transport where they would certainly be given careful attention. He did wonder though whether they had done as much as they should in that regard in the period between the wars and the 10 years that followed the 1939-45 war. Looking back it seemed that Governments of all complexions had been notable largely for having done nothing to further the development of inland transport. Little had been done to foster roads for the growing road transport industry and even less to enable the railways to meet the problems that the development of this competition produced. Now, at any rate, something was being done for both. The railways, which were still a nationally essential asset, were being supported financially to accelerate their modernisation and there were the extensive road construction programmes. These could hardly keep pace with the increase in the number of vehicles and in that respect there was a need to take a leaf from the American book and make full use of traffic engineering while refraining from making their mistakes. Allied to this there would certainly be a need for much stricter road discipline with rigorous enforcement of the necessary regulations. With their knowledge of the problems members of the Institute could give appreciable support to those ends.

LEADING FEATURES IN THIS ISSUE

Portrait	PAGE	PAGE
Isambard Kingdom Brunel ..	9	A35 Road-Rail Convertible: Useful Rhodesia Railways Modification ..
<i>Special Articles</i>		
Need for an Aircraft Policy ..	2	Modern Airways Section
Derby-Built Main-Line Diesel Locomotive: Sulzer-Crompton Parkinson 2,300 or 2,500 h.p. Type 4 ..	3	New London Heliport: Enterprise of Westland ..
Centenary at Saltash: The Cornwall Railway and Royal Albert Bridge. By C. R. Clinker ..	5	Regular Features
New L.T.E. Garage at Stevenage ..	6	Commercial Aviation ..
Aluminium Production in New Zealand ..	9	Financial Results ..
Sea Links with the Continent: 20—By Eagle Steamers to France ..	11	Forthcoming Events ..
Driverless Trucks: Western Region Experiments ..	12	Important Contracts ..
		Letters to the Editor ..
		Lorry, Bus and Coach News ..
		News from All Quarters ..
		Road Vehicle Industry ..
		Shipping and Shipbuilding ..
		Social and Personal ..
		Tenders Invited ..

so. It was not possible to say that the first aim of the L.T.E. was to give the best possible service to the public nor was it to provide the cheapest service feasible. It was essential to deal with the two in inter-relation. The search must always be to find what suited the mass of the population best as regards standards of service and level of fares. Of course the public could have better facilities, but it would cost more. Conversely it could have a more austere service with fares which were marginally reduced. If that was considered the first task, then the second was obviously to ensure that, whatever standard of service was given, it was done with the minimum of waste. London Transport was acknowledged as very efficient in that direction, but there was always room for fresh ideas and new techniques in pursuing that aim.

Slower is Safer

EXPERIENCES in three European countries—Belgium, the Federal Republic of Germany and the Netherlands—seem to show that the introduction of speed limits results in a considerable drop in the number and seriousness of road accidents, according to reports to a session of the Working Party on the Prevention of Road Traffic Accidents of the Inland Transport Committee of the United Nations Economic Commission for Europe, held at Geneva from April 6 to 10. In Belgium, the limitation of speed to 70 kilometres per hour outside built-up areas for two months brought about a reduction of 8 per cent in the accident rate and of 17 per cent in the number of persons killed or seriously injured, while in the Netherlands imposition of a speed limit of 50 k.p.h. in most built-up areas has reduced the number killed by 16.8 per cent. In Federal Germany there has been a reduction of 18.1 per cent in the number killed since the introduction of a general speed limit of 50 k.p.h. in built-up areas and since the imposition of a limit of 100 k.p.h. on the Frankfurt-Mannheim motorway there has been a 50 per cent reduction in the number of personal-injury accidents and 60 per cent reduction in damage-only accidents. Further tests are recommended.

tenets of common sense and common decency that are already adequately covered in the Highway Code. While not many appear capable of exercising such self-control for long periods, there is no doubt that a conscious effort to improve concentration while driving would have far-reaching effects. We should not really need to be reminded to show consideration for all other road users and care and courtesy when approaching pedestrians, two more of the points covered, for consideration for the weaker or more vulnerable is said to be a natural characteristic of the British. On 500 miles of trunk roads a little enforced consideration is to be introduced from May 12 with penalties for crossing the double white line. But driving might well be improved by the introduction of some system of graded licences and official encouragement for the teaching of advanced driving.

Hours and Wages in Engineering

THE issue as to whether the Amalgamated Engineering Union shall press for shorter working hours rather than higher pay, or go for both at once, is a confused one. An appeal for a greater sense of responsibility amongst members and more loyalty to the executive was made by Mr. W. J. Carron, its president, when addressing the Union's national committee at Eastbourne this week. A small proportion of the membership, he said, were ready to attack national officers who carried out the union's policy and operated the rules; this indicated personal enmity or political activity directly opposed to the policy decided upon by the delegates. "The increasing tendency to abrogate our rules and the menace of wilful rejection of instructions issued by the executive council," he asserted, "are combining in such a manner as to involve the union in more instances of legal difficulty and unnecessary expense." There were many completely unauthorised and often unnecessary stoppages of work, and in many cases the matter was not even brought to the notice of local officials. A vocal minority in the union talked lightly and irresponsibly of making claims with little real appreciation of the possibility of securing benefits for members. The executive concurred in the view that shorter

ANGLO-CONTINENTAL CONTAINER SERVICES

(LONDON) Ltd. and (BELFAST) Ltd.



House flag flown by ships of A.C.C.S.

● DAILY SAILINGS

* * * *

● ENQUIRIES INVITED

ENGLAND, SCOTLAND & N. IRELAND

Ports of Shipment being: Preston (Lancs.), Larne (Co. Antrim) and Ardrossan (Ayrshire)

BELFAST: 35/9 Middlepath St. Belfast 59261/5

LARNE: (Co. Antrim) Bay Road. Larne 2331/2

PRESTON: (Lancs.) The Dock. Preston 86742/4

MANCHESTER (2): 270/1 Royal Exchange

Buildings, Blackfriars 9287/9

BRISTOL (1): 61 Park St. Bristol 25435/6

ARDROSSAN: (Ayrshire) Harbour Street, Ardrossan-Saltcoats 1911/2

GLASGOW (C.2): 10 Bothwell St. City 6997/8

LONDON: (Depot) Elland Rd., S.E.15. New X 4885/7

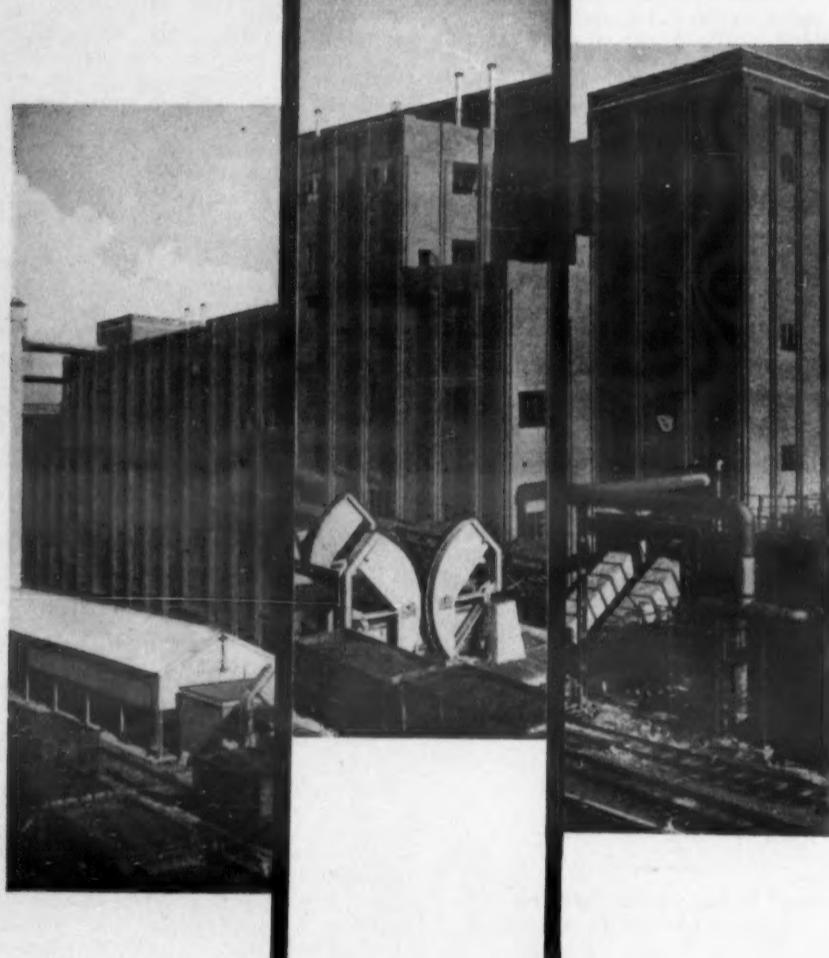
LONDON: (Offices) 79 Dunton Rd., S.E.1. Bermondsey 4881/4

PICKFORDS HEAVY HAULAGE SERVICE

Abnormal Loads • Lifting

MOBILE CRANES FOR HIRE • Branches in all large towns

SERVICE FOR A SERVICE



The Gas Industry serves the

British public at home and at work.

British Railways serve the Gas Industry.

Coal in : coke out — by rail

Better services — Bigger wagons

Keen competitive prices

BRITISH RAILWAYS

Information can be obtained from any station master or goods agent, or from:
 Commercial Officer, Eastern Region, Liverpool Street Station, London EC2 (Bishopsgate 7600)
 Commercial Officer, London Midland Region, Euston Station, London NW1 (Euston 1234)
 Commercial Officer, North Eastern Region, Headquarters Offices, York (York 53022)
 Chief Commercial Manager, Scottish Region, 87 Union Street, Glasgow CI (Douglas 2900)
 Chief Commercial Manager, Southern Region, Waterloo Station, London SE1 (Waterloo 5151)
 Commercial Officer, Western Region, Paddington Station, London W2 (Paddington 7000)



Published Every Friday

RUSSELL COURT, 3-16 WOBURN PLACE,
LONDON, W.C.1

Telephone Number: TElerimus 0303 (3 lines)

Telegraphic Address: Transpahco, Westcav, London

ANNUAL SUBSCRIPTIONS

BRITISH ISLES, 35/-; CANADA, 32/6;

ELSEWHERE ABROAD, 35/-

payable in advance and postage free

The Editor is prepared to consider contributions offered for publication in MODERN TRANSPORT, but intending contributors should first study the length and style of articles appearing in the paper and satisfy themselves that the topic with which they propose to deal is relevant to editorial requirements. In controversial subjects relating to all aspects of transport and traffic this newspaper offers a platform for independent comment and debate, its object being to encourage the provision of all forms of transport in the best interests of the community.

We desire to call the attention of our readers to the fact that Russell Court, 3-16 Woburn Place, London, W.C.1, is our sole London address, and that no connection exists between this newspaper and any other publications bearing some what similar titles.

Need for an Aircraft Policy

THE recent conference on aircraft production problems organised by the Southampton branch of the Institution of Production Engineers was based on the theme "The aircraft industry—a national asset" and certainly resulted in some determined expositions of points of view. It was, moreover, all to the good that a user in the chairman of British European Airways, Lord Douglas of Kirtleside, had the opportunity to remind those in the aircraft industry of what the operator needed and what he often did for the manufacturer by serving as a proving ground. There is sometimes a tendency within the industry to assume that it knows best and that an airline is making unreasonable difficulties when it seeks modifications in the design of the new machine which it has committed itself to using. As Lord Douglas pointed out, the introduction of a new type to service is very expensive for an airline; he considered that the short-term adverse effect upon B.E.A.'s financial results of introducing one new major type every four years was of the order of £1,600,000 spread over that period. If it was found necessary, as was indeed the case, to introduce two new types—the Vanguard and the Comet 4B almost simultaneously and then to follow them four years later by another in the shape of the DH121, the corporation's financial results would probably be adversely affected by consequential activities to the tune of some £500,000 a year.

Role of the Corporations

CERTAINLY improved economic effects achieved by the new types can, in the longer term, go some way to offset these additional costs, but it was all to the good that the implications of accepting a new type rather than buying an existing design from abroad—probably America—should be emphasised. Claiming, with justification, that B.E.A. was one of the most active and successful airlines in the world so far as sponsoring new aircraft was concerned, Lord Douglas added that, apart from the financial burdens involved, there was also the risk that the new aircraft might be unsuccessful with all that that might imply in loss of revenue and prestige and nugatory expenditure. This contribution was, however, essential, together with a parallel one by the British Overseas Airways Corporation, if the United Kingdom was to continue to manufacture transport aircraft. This side of the responsibilities of the airways corporations is, in truth, one that is often overlooked by those who propose their dismemberment or at least some weakening of their position. Any British operator that benefited as a result of such action would not necessarily be in a position to afford an equal degree of help to the aircraft manufacturer and the Government might well find itself compelled to provide more financial support for aircraft development than it may already be forced to contemplate. It is true that it will need, in any case, to sponsor research and development to a greater extent than heretofore in order to counterbalance the declining defence interest in manned aircraft and its consequential effects.

Lessons of the Past

LEARNING from the past led Lord Douglas to feel that British aircraft manufacturing resources should be concentrated on a narrower front in the civil field—there had been attempts to develop and build too many overlapping types of major transport aeroplanes. Greater effort must be directed at developing British types more rapidly and more thoroughly. Greater initial investment was required so that a larger number of each new type was available for test and development flying before it obtained its certificate of airworthiness and entered airline service. More ground testing of components was essential as was more intensive and extended flight testing to eliminate defects so that these could be exposed and corrected before passenger-carrying operations started. No British firm should be expected to undertake more than one major transport design simultaneously and it was significant in that connection that no American manufacturer—even such large ones as had several times the resources of the biggest British concerns—had, in the past, developed successfully a second basic design of large transport aeroplane while still engaged in the full-scale development of its previous major civil type. Every new British transport machine should be evolved in close association with a United Kingdom airline which should also be the first operator thereof. This joint effort must extend from the initial framing of the new design to meet an agreed specific requirement right through the subsequent development and must continue during the aircraft's service life. When it came to certain important types with good export prospects but no qualifications as major requirements for either of the British airways corporations, arrangements were needed for Government support. B.E.A. and B.O.A.C. might order small numbers off the shelf to meet secondary requirements if they were first developed and initially brought into service at the expense of the Government or some other airline.

An Early Decision Required

IT must be said at this stage that the B.E.A. chairman was obviously assuming acceptance on the part of all concerned of the essential nature of the aircraft industry and, in the present state of the world, it has to be agreed that the assumption was a reasonable one. The stumbling block is likely to be the usual one of finance and, indeed, the progressive increase in the cost of modern aeroplanes is one of the major complications which must be overcome. On its past record the industry cannot blame those who question whether it has always made the best economic use of the resources placed in its hands and suggest that any scheme involving Government support must have attached safeguards which are more effective than retrospective comments by the Select Committee on National Expenditure. At this stage, however, it seems reasonable to argue that, even although there is some justification for such criticism, there is so much at stake that Government support is justified to ensure that the vast sums already spent are not simply thrown away. The ramifications of the industry are extensive and regard must be paid to the enormous expenditure of the U.S.A. and U.S.S.R. upon comparable and even more advanced developments than those yet contemplated in Britain. It would be simpler if there were general acceptance of the need for a decelerated rate of progress and that would undoubtedly be welcomed by the airlines, but meanwhile, with things as they are, Britain must be ready to reach an early decision on future policy.

Forthcoming Events

May 2-3.—Railway and Canal Historical Society. Weekend at Peterborough including annual general meeting and dinner and visits to railways and River Nene Navigation.
 May 3.—Norbury Transport and Model Railway Club. East Kent Coach Tour. Meet Canterbury East 12 noon.
 May 4.—Trade and Road Transport Association. Annual dinner. At Grosvenor House, W.1.
 London School of Economics. Lecture by Dr. M. J. Wise. "Industrial Location: A Geographical Approach." At Houghton Street, W.C.2. 5 p.m.
 May 5.—Institute of Road Transport Engineers (N.W. Counties). Annual general meeting. At Liverpool Architectural Society's Rooms, Bluecoat Chambers, School Lane, Liverpool, 1. 7.30 p.m.
 May 6.—Institute of Petroleum. Symposium, "Submarine Exploration for Oil." At 61 New Cavendish Street, W.1. 5.30 p.m.
 Electric Railway Society. Papers by Messrs. M. W. Cope, "Origins of A.C. Traction," and P. Hale, "It's Safer by Rail." At 180 Drummond Street, N.W.1. 7.15 p.m.
 May 6-8.—Institute of Materials Handling. First International Conference. At Waldorf Hotel, W.C.2.
 May 7.—Institute of Road Transport Engineers (Yorkshire). Visit to Ferodo, Limited, Chapel-en-le-Frith.
 May 8.—Institute of Road Transport Engineers (South Wales). Open Forum. At South Wales Institution of Engineers, Park Place, Cardiff.
 May 8-9.—Railway Students' Association. Visit to Plymouth. Permanent Way Institution (London). Joint visit with North section British Tubular Bridge Menai Straits. Permanent Way Institution (Leeds and Bradford). Visit to Dimbleby long-welded rail plant.
 May 10.—British Helicopter Rally. At Woburn Abbey. Omnibus Society. Visit to Great Yarmouth Corporation Transport Department. Meet Transport Offices, Caister Road. 2 p.m.
 Omnibus Society (North Western and Yorkshire). Visit to West Riding Automobile Co., Limited. Meet Belle Isle, Wakefield. 2.15 p.m.
 May 12-14.—Public Transport Association. Annual conference. At Folkestone.
 May 20.—Road Haulage Association. Annual dinner. At Grosvenor House, W.1. 7 for 7.30 p.m.
 May 24-30.—International Union of Public Transport. Congress. In Paris.
 June 16-25.—Institute of Transport. Congress. In Copenhagen.

DERBY-BUILT MAIN-LINE DIESEL LOCOMOTIVES

First of 147 of 2,300 or 2,500 H.P.

SULZER-CROMPTON PARKINSON 1-C-C-1 OF TYPE 4

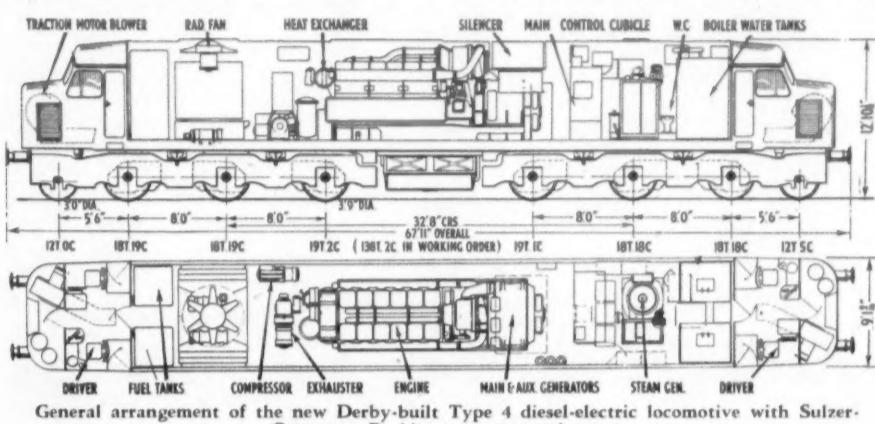
THIS first of the most powerful main-line diesel-electric locomotives to be erected in the workshops of British Railways under the modernisation programme was on show at Marylebone Station last week. Numbered D1 and named *Scafell Pike*, the locomotive was built at Derby and is of 2,300 h.p.; it is designed for mixed traffic duties and is capable of hauling a heavy express passenger train at speeds of up to 90 m.p.h. or a train of 660 tons gross weight at a speed of 74 m.p.h. on level track. It is the first of a series of 147 locomotives which are to be built at Derby and Crewe for the London Midland Region. They will be the biggest and most powerful diesel locomotives to be introduced by that region. Some of the later locomotives are to have similar engines with an improved power rating of 2,500 h.p.

These locomotives, Nos. D1-D147, have been designed and are being constructed to the

which the traction motor blower units are housed. Air is drawn by the blowers through louvres on the sides of the nose compartments. The superstructure also embraces separate compartments for power unit with controls and carriage warming boiler, with communication doors between each and the driving cabs. Side access covers and light alloy roof doors above the engine are provided to facilitate servicing. For major overhauls detachable roof sections are provided for easy removal of the major units of equipment.

Equipment

A self-draining sealing plate is provided under the floor running the full length between the cab bulkheads to prevent leakage oil and water getting onto the bogies and battery equipment. Clean fuel oil spillage is collected separately and ducted back to the main fuel tank. A silencer of large volume is mounted in an external roof pocket to assist heat dispersal. The complete locomotive is lined with fibreglass navy board. The front cab windows are double-glazed with an electric heating element fitted in the intervening air space which



General arrangement of the new Derby-built Type 4 diesel-electric locomotive with Sulzer-Crompton Parkinson power equipment

requirements of the British Transport Commission under the general direction of the chief mechanical engineer and chief electrical engineer, British Railways Central Staff, B.T.C., the detailed design and supervision of construction being the responsibility of the chief mechanical and electrical engineer, Derby, London Midland Region.

Peak Class

The first ten locomotives ordered under the initial programme, will be allocated to Crewe North motive power depot. The London Midland Region is to name the locomotives after peaks in the Lake District, the Pennines and North Wales, which are either the highest in their respective areas or have some other distinctive characteristics. Other names selected are: D2, *Helvellyn*; D3, *Skiddaw*; D4, *Great Gable*; D5, *Cross Fell*; D6, *Whernside*; D7, *Ingleborough*; D8, *Pen-y-ghent*; D9, *Snowdon*; and D10, *Tryfan*. The other 137 locomotives, which were ordered earlier this year, will be allocated to depots on delivery. All the locomotives are expected to be in service by the end of 1961.

The new units can work singly or in multiple with other diesel-electric locomotives, including

acts as a demister and defroster. Screen wipers are also provided. The cabs are heated by electric radiators and ventilated by two-way roof cowls. An electric cooker is provided in each cab.

A minimum of instruments confronts the driver and the various controls and indicators are conveniently and neatly arranged. A wheel slip light and "engine stopped" light are provided together with boiler and power equipment fault lights. These lights glow dimly under normal conditions, but come up brightly when a fault occurs. A detailed indicator in the engine compartment shows which part of the equipment is giving trouble.

Bogies

The bogies, each of which has three driving and one carrying axle, are of the side frame plate type, based on the design developed for the electric and diesel-electric locomotives on the Southern



The locomotive arriving at Marylebone for inspection

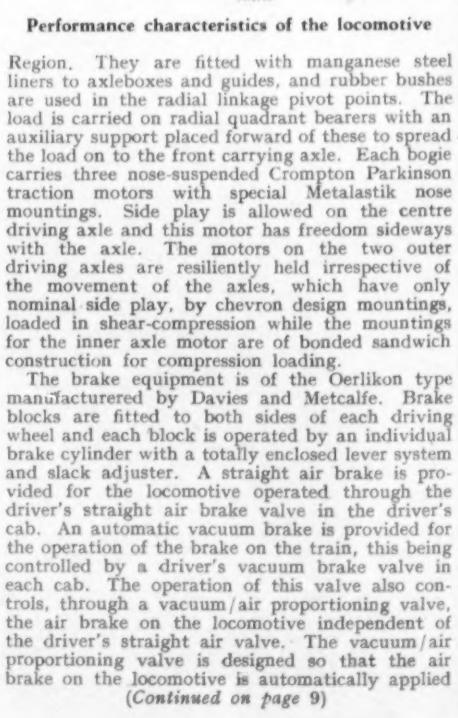
those with B.T.H., Crompton Parkinson or English Electric electrical equipment. They are classified as Type 4 in the British Railways classification of main-line diesel locomotives. They have a 1-C-C-1 wheel arrangement, Sulzer diesel engines of 2,300 or alternatively 2,500 h.p., built at Vickers-Armstrongs works at Barrow-in-Furness for Sulzer Bros. (London) Limited, and Crompton Parkinson electrical equipment. The length over buffers is 67 ft. 11 in., the overall height 12 ft. 10 $\frac{1}{2}$ in. and the overall width 9 ft. 1 $\frac{1}{2}$ in. The motored axles have wheels 3 ft. 9 in. diameter and the carrying wheels are 3 ft. diameter. The weight in working order is 138 tons 2 cwt. The maximum tractive effort is 70,000 lb. They pass the L2-C1 loading gauge.

Underframe

The underframe consists of a continuous 10 in. by 3 $\frac{1}{2}$ in. channel which forms the outline of the underframe, with cross stretchers forming engine and bogie bearer and pivot supports. Longitudinal box section members run down the centre of the underframe from each end of the locomotive to the cross stretchers carrying the engine. These act as structural members, and also form air ducts for ventilation of traction motors. The side girder frames are welded direct to the channel section of the underframe and are tied together at the top by the roof frames. A cable duct with oil- and water-tight covers runs along one side of the underframe and pipe lines run underneath the floor on the opposite side. Each bogie is fitted with Turplat buffers and centre drawhook, but provision has been made for the fitting of automatic couplers if required in the future.

A driving cab is provided at both ends of the locomotive, each with a nose compartment in

Performance characteristics of the locomotive



On main-line express service

SKF spherical roller bearing axleboxes

are fitted to the first main line diesel hydraulic locomotive to be built in British Railways' own workshops—Sir Brian Robertson, No. D800.

This locomotive is now in regular service with many other types of **SKF**-equipped locomotives and rolling stock.

SKF

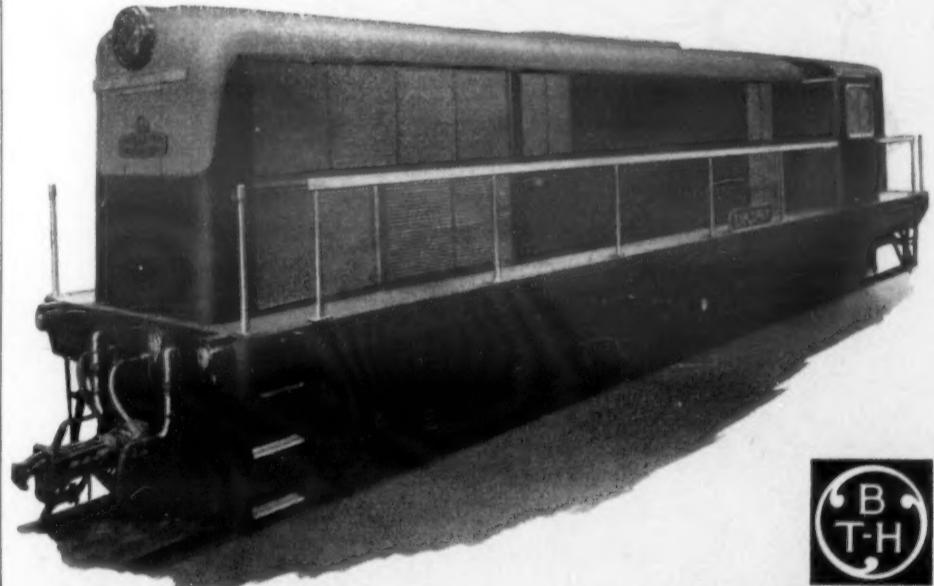
SPHERICAL ROLLER BEARING AXLEBOXES



THE SKEFKO BALL BEARING COMPANY LIMITED • LUTON • BEDS
THE ONLY BRITISH MANUFACTURER OF ALL FOUR BASIC BEARING TYPES: BALL, CYLINDRICAL ROLLER, TAPER ROLLER & SPHERICAL ROLLER

R83a

BTH introduce the diesel-electric **'EXPLORER'**



A NEW CLASS OF LOCOMOTIVE FOR MIXED TRAFFIC DUTY UNDER ARDUOUS CONDITIONS

Produced in conjunction with Lister Blackstone Rail Traction Limited

This is an 1100 h.p. diesel-electric locomotive specially designed to give outstanding service where the going is hard. It is particularly suitable for overseas railways operating in difficult

terrain. Maximum power is sustained at sea level in an ambient temperature of 120°F, or up to an altitude of 4,000 ft. at an ambient of 85°F.

Please write for further details of operational performance, and full technical data concerning the 'Explorer' class locomotives.

BRITISH THOMSON-HOUSTON

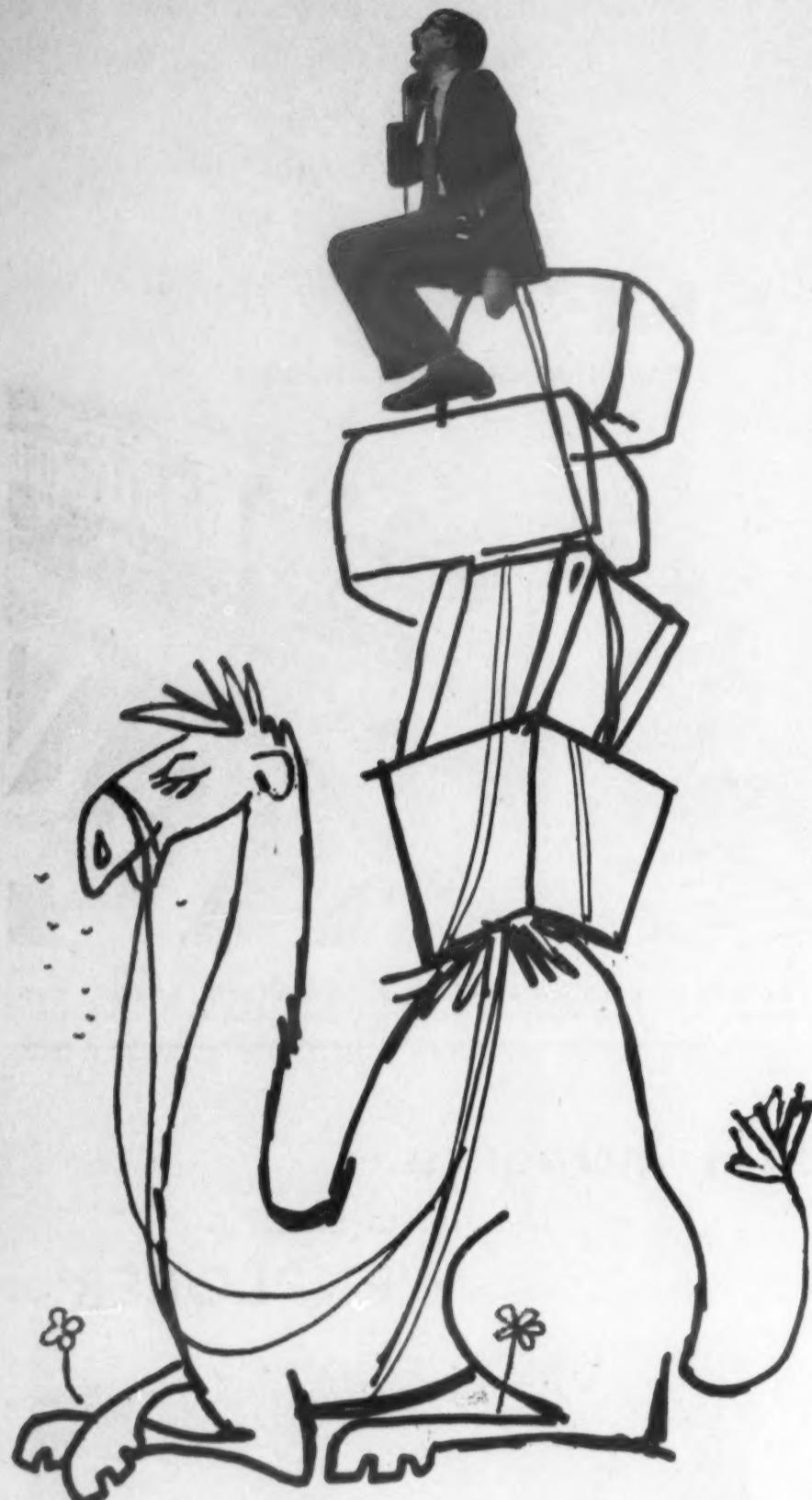
THE BRITISH THOMSON-HOUSTON COMPANY LIMITED • RUGBY • ENGLAND

an AEI Company

A5373

(Continued on page 9)

'For the love of Mike—get me B.R.S.'



To get things moving —get B.R.S.

Some people go on wrestling with their transport problems. Others prefer to let British Road Services deliver door-to-door, door-to-dockside or by road across the sea to Northern Ireland and the Continent. Any load, big or small. Awkward or otherwise. No fuss. Because modern techniques are used. Because B.R.S. have the right vehicle for the job. Because their nationwide teleprinter network ensures that your very latest instructions are carried out. Simply lift up the telephone and ...

Ring British Road Services
(You will find them in the 'phone book)

LORRY—BUS—COACH

London Scottish Lines Hearing

STRIKES at Leith and London docks were on Monday blamed for London Scottish Lines, Limited, having to withdraw its steamers. Mr. T. M. W. Trotter, general transport manager for Scottish London Lines, Leith, gave evidence at a sitting before the Scottish Area Licensing Authority, Mr. W. F. Quin, when an application for an A-licence for 24 vehicles (MODERN TRANSPORT, February 21) was considered. There were eight objectors to the application—British Railways, British Road Services, and six independent hauliers. The main reason for the application, said Mr. Trotter, was to give a better service to their old-established customers who had been temporarily deprived of this service because of the withdrawal of the steamers, said Mr. Trotter. The goods carried were mainly whisky, paper, and general merchandise. The strikes had cost the company £20,000, it was alleged. The inquiry was adjourned for further evidence.

M.O.T. Road Transport Survey

FROM a reply given by Mr. G. R. H. Nugent, the Joint Parliamentary Secretary, M.O.T., in the Commons it appears that the report of the M.O.T. road goods transport industry survey conducted about a year ago may be published this month or some time thereafter. He denied any suggestion that there was any ulterior motive in holding back these returns, for example, because they were unfavourable to C-licence holders.

Another Attempt at Fuel Tax Rebate

PRESSURE is being put on the Chancellor of the Exchequer by Mr. Rupert Speir, M.P. for Hexham (Northumberland), scene of a recent report on facilities in rural areas, to amend the

received by drivers of A- and B-licensed tankers employed on work which is the subject of contracts with the oil companies. The group committee unanimously agreed that a valid case had not been made out to justify supporting an increase in wages for drivers of tanker vehicles employed on work other than oil companies contracts.

Exploratory discussions have taken place on the possibility of members being able to offer, when agreement has been reached on a free trade area, a delivery service to Continental countries and a delivery service in this country for Continental traffic.

Complaints have been made that health inspectors, though anxious to ensure that meat carriers operating specially designed vehicles do not transgress the requirements of the hygiene regulations, appear to condone the practice of meat being carried on the back seats of private cars, on the floors of utility vehicles, and in some cases, in vans with fruit and vegetables. The meat transport group has also been perturbed about illegal operations by holders of public carriers' licences and the use, to carry meat from markets, of vehicles which display neither a licence disc nor an excise licence, a practice which "generally occurs between 6 a.m. and 9 a.m. in the morning."

Attention has been focused on an agreement between the Central Electricity Generating Board and the B.T.C. providing for the movement of a large volume of coal to power stations, previously the subject of a contract with a road transport operator, to be transported by rail. It is understood that in some cases the agreement has resulted in an increase in the cost of the movement of coal to power stations, and in view of the continuous losses of British Railways, it is difficult to accept that such supplies will be moved at a more economic rate than that charged by road transport operators. Implementation of the terms of the agreement were delayed as a result of negotiations between other interests and the B.T.C., but reports from mem-



The breaker's yard at Charlton where London Transport trolleybuses are being dismantled for scrap. Since January this year and up to April 14, 218 trolleybuses had been handed over to, or earmarked for, contractors

Finance Bill so as to allow fuel duty to be reduced in respect of buses operating on unremunerative rural routes. Mr. Speir is ready to point out that the excise tax relief amounted to about 4d. a mile whereas the gap to be closed if rural services are to be put on a paying basis is between 6d. and 8d. a mile. He also notes that if rural transport collapses, the cost of providing special transport facilities for schools and hospitals and for health and other services will be substantial.

Highland Renews Hiring Application

FRESH application has been made by Highland Haulage, Limited, of Inverness, to the deputy Scottish area Licensing Authority for a fleet of vehicles on A-hiring allowances to meet seasonal traffic peaks. As recently as last month the company was refused a similar application in respect of 30 vehicles, Mr. Alex Robertson stating that there was insufficient evidence of inconvenience caused by unsatisfactory sub-contracting. He also said a grant would take control over the licensing of season traffic away from the licensing authority. (MODERN TRANSPORT, February 28 and March 7.)

Now Highland Haulage is seeking 20 vehicles on the A-hiring basis, but split up into two groups of 10 each with different normal users for each group. One group would normally be hired between September 1 and April 30 each year, the other normally between January 10 and April 10 and September 20—December 20. Normal user for the two groups is substantially similar; "fish, agricultural produce and requisites, and timber from North Scotland to South Scotland and England." In the meantime short-term hiring allowances are sought for 10 vehicles in September—December of this year and January—April of next.

Review of R.H.A. Work in 1958-59

AS is customary, the annual report of the Road Haulage Association for 1958-59 discloses a great variety of topics in which the Association is interested. The following is a summary of some of the points in the report:

The licensing committee achieved its object of re-establishing satisfactory licensing liaison with the British Transport Commission and, in particular, of securing the appointment of a licensing liaison committee to reach decisions on any recommendations agreed by the licensing sub-committee. However, the liaison committee was unable to approve a recommendation of the sub-committee that, where B.T.C. applications are considered by a negotiating committee the representative of the appropriate division of the Commission (for example, B.R.S.) should withdraw from the discussion. The committee will, however, reconsider this proposal if difficulties are experienced in the operation of the existing procedure, which was devised under conditions in which the B.T.C. was not required to hold carriers' licences and did not, therefore, appear before a negotiating committee as an applicant.

The Transport and General Workers' Union requested support from the bulk liquids group of the R.H.A. in an application to the National Joint Industrial Council for an increase in wages for drivers of road tank vehicles. The union's approach sought for the drivers of both A- and B-licensed tankers, the payment of wages equal to those of drivers of C-licensed tank vehicles, in accordance with the terms of the oil companies conciliation agreement. These higher rates of pay are

bers early in the New Year disclosed that operators based in the East and West Midlands, and South Yorkshire areas had lost coal traffic to British Railways.

What Licence for Laundry Agents?

IN his view, a B-licence was necessary for a vehicle used to collect and deliver articles for dry cleaning, the South Wales area Licensing Authority said in Cardiff this week. He was dealing with four applications to collect and deliver articles subjected to laundering or dry cleaning, on a discount allowed by the cleaning firms for whom they collected by arrangement. The licensing authority, Mr. Idris Owen, referred to section 1(5) of the Road and Rail Traffic Act, 1933, and said that the applicants were only agents of the person who subjected the goods to a process or treatment. Objecting to this and other applications, Mr. T. Pearce, director of Bazeley and Pearce, Limited, Trelewis, agreed that there was quite a battle going on in the Monmouthshire valleys between agents. The licensing authority granted two B-licences.

Substitution of Heavier Vehicle

TWO desirable amendments to the Goods Vehicles (Licences and Prohibitions) Regulations, 1952, are put forward by the Transport Tribunal in its written judgment on an appeal by Mr. G. Allinson in order to defeat malpractices regarding substitution of vehicles on carriers' licences. The first is that the regulations should (a) prescribe the form of licence and (b) require the unladen weight of every specified vehicle to be stated thereon. The second point is that licensing authorities should in every case where the unladen weight of a vehicle is a material fact require that weight to be authenticated by a ticket from an approved weighbridge. This was an appeal surrounding the undisclosed substitution on a special A-licence of a vehicle of considerably heavier weight and the subsequent revocation of the licence. The Tribunal says that it was surprised to hear described (by a legal representative) as a point of "great importance to a large number of road hauliers" one in which something termed a legitimate "manoeuvre" in fact involved a deliberate fraud.

These remarks arise out of a submission on behalf of the appellant that the variation was one which the licensing authority was bound to grant and that Section 9(4) of the Transport Act, 1953, which refers to false statements, could not be applied to it. The Tribunal rejects this latter argument. The Minister of Transport has never prescribed the form of a carrier's licence; in this case the S.A.-licence, when varied to show the substituted vehicle, did not state its unladen weight.

Bus and Coach Developments

Wolverhampton Corporation proposes a new service in Wednesfield from Regal Cinema to Ashmore Park Estate via Stubby Lane.

Hughes Brothers, Llansilin, Oswestry, seeks the Oswestry-Rhyl and Oswestry-Groesford services of the late Peter Edwards.

Don Overall, Limited, Wolverhampton, applies for the Stourbridge-Blackpool service of Samuel Johnson (Supreme) Limited.

Graham's Bus Service, Limited, Paisley, proposes an Elderslie (Fulbar Road)—Penilee (Craigmillar Road) via Ferguson High Street and Penilee Road. Double-deckers would be used.

M. V. and S. S. Smith, Batcombe, Shepton Mallet, apply for the Westcombe-Frome, Brewham-Frome, Batcombe-Shepton Mallet and Batcombe-Brunton services of W. H. Green together with his excursions and tours.

CENTENARY AT SALTASH

The Cornwall Railway and Royal Albert Bridge

By C. R. CLINKER, President, Railway and Canal Historical Society

At the beginning of the 19th century, much of Cornwall's wealth was derived from mining, agriculture, and the sea which played a greater part in Cornish life than the land. The county's 300-odd miles of coastline was studded with harbours of all sizes, from the smaller fishing ports of Polperro, Newlyn and Port Isaac, to the commercial trading ports at Hayle, Portreath, Padstow and, most important of all, Falmouth, whence sailed the Government-controlled packets to North America and the West Indies. Its traffic in minerals with South Wales was carried on by sea and the regular sailings between Bristol and Hayle provided communication for passengers and every variety of general trade. Until 1859 this was, in fact, the normal route from West Cornwall to London, using the Great Western Railway from Bristol.

Though exhibiting insularity in some things and remote from the busy up-country industrial areas, Cornwall was by no means ill-informed as to what was going on elsewhere. By 1716 steam engines were being employed in mining; on Christmas Eve, 1801, a Cornishman, Richard Trevithick the younger, had scared the people of Camborne with his steam road carriage. Railways, too, had been promoted and built; from the mines at Poldice to Portreath Harbour (in use by 1812), St. Austell to Pentewan (1830) and the first steam-worked line, the Bodmin and Wadebridge, opened in 1834. Nor were there wanting people to propound the advantages of rail communication with the rest of the country. As early as 1835 Lord Falmouth had been instrumental in promoting a company for constructing a line from Salisbury, through Exeter, Okehampton, Launceston and Bodmin to Falmouth. The cost of building the Exeter—Falmouth portion of this was alone estimated at £1 million. A variant, put forward by Seymour Tremenheere in 1839, was to run to Penzance, where Mounts Bay, suitably converted, would form "a safe and magnificent harbour."

Falmouth as Packet Port

The Salisbury company was dissolved in June, 1838, but not before its place had been taken by another project. The immediate cause of this

scheme out of the hands of "disinterested landowners who were clogging it." Less talk and more positive action would produce results. It dismissed as absurd a suggested appeal to the Great Western for financial support when even the trivial expenses were still unpaid.

Cut Out by Southampton

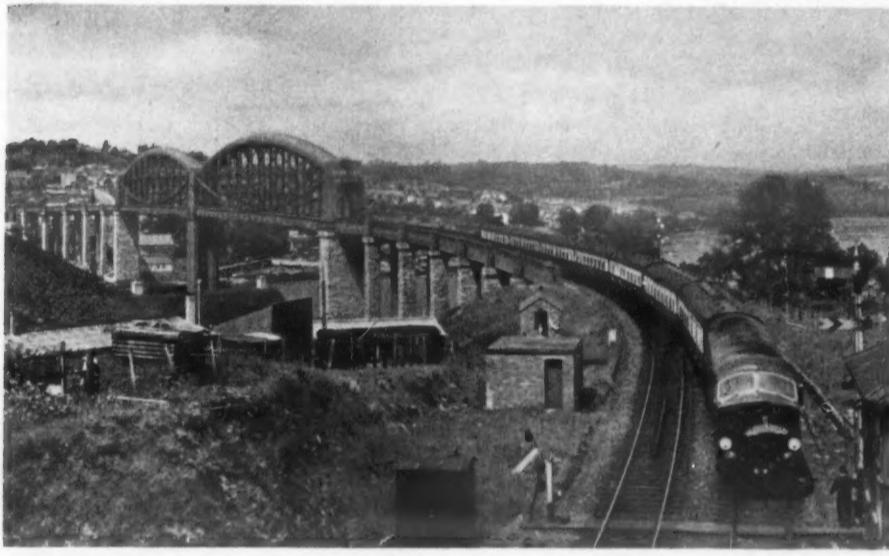
On May 29, 1843, the House of Commons was informed that the packet station was to be removed from Falmouth to Southampton. The announcement was immediately followed by meetings of protest and sending of resolutions to the Treasury. A deputation saw the Prime Minister, Sir Robert Peel and was icily told "that the existence of a railway between Exeter and Falmouth would put a different complexion on the matter, but he knew of no such Bill in Parliament." From September 18 Falmouth ceased to be a packet station.

Though surely aware that they were "locking the stable door" the railway promoters immediately set about collecting subscriptions. By November, 1843, £450,000 had been promised and, in view of the fact that the Bill for the South Devon Railway from Exeter to Plymouth was to come before Parliament in 1844, the committee met to consider whether their original route through central Cornwall was likely to receive the support of the Great Western, the Bristol and Exeter and the embryo company.

Rival Groups

Here, regrettably, a split occurred and the committee divided into two rival groups. The original central line party, led by Thomas Harvey, approached the London and South Western and obtained a promise of pecuniary aid so soon as their Bills for an extension from Salisbury to Exeter were passed. Those favouring the new south, or coastal, route to join the South Devon Railway at Plymouth were captained by J. T. Treffry, with the support of that company and the Bristol and Exeter and Great Western. Nearly all the larger landowners and people of importance in the county backed this proposal.

The stage was now set for battle. On October 23, 1844, the prospectus of the Cornwall Railway (the south route) appeared. With a capital of £900,000 it was proposed to build a railway from the South Devon at Plymouth, crossing the Hamoaze, through



The up Cornish Riviera Express hauled by diesel-hydraulic locomotive D600 leaving Saltash Bridge, the centenary of which falls on May 2

sudden revival of interest was a threat by the Government to remove the packet services from Falmouth to some more accessible port, a move which had the backing of merchants engaged in the Peninsular and Mediterranean trades. At a meeting on March 18, 1840, they strongly recommended Portsmouth or Southampton, to which place the London and Southampton Railway was on point of completion. The Government replied by appointing a Commission to make recommendations. In August, 1840, it reported in favour of Dartmouth, with a railway to Exeter to join the Bristol and Exeter already under construction.

The threat was taken seriously. In September, 1839, Sir Hussey Vivian wrote to all the principal landed proprietors in the county pointing out that if Cornwall was not to be left behind, a railway must be formed without delay. On October 29 "a great county meeting" was held at Bodmin. Seldom had there been such a gathering of the wealthy and influential. Long speeches from Lord Falmouth, Sir Charles Lemon, E. W. Pendarves and others advocated immediate action and were followed by resolutions and appointment of a committee. Their efforts were reinforced by strongly worded editorials in the *Falmouth Packet* and *West Briton* newspapers, both of which printed a number of letters from the West Indies stressing the importance of quicker transit between Falmouth and London. The railway weeklies took up the cry and taunted Cornishmen with forgetting their county motto, "One and All."

A Railway Project

But *festina lente* was the order of the day. In 1839, no fewer than 341 vessels called at Falmouth; on one day in May, 1840, 24 ships berthed from foreign ports. For a whole year committees met and produced reports, but it was not until March 17, 1841, that Capt. W. S. Moorsom presented his survey for a railway from the Bristol and Exeter at Cowley Bridge, through Okehampton, Launceston, Bodmin and St. Austell to Truro and Penzance, 104 miles, which he estimated would cost £1,331,839. A week later the House of Commons decided by a narrow majority to appoint a Select Committee to reconsider the packet question.

In the midst of cynical comments by the press, another county meeting at Bodmin took place on January 5, 1842, to consider how the £1 million of capital could be raised, seeing that only £1,800 had so far been subscribed towards a paltry £2,000 required for the preliminary survey and attendant expenses. The *Falmouth Packet* outspokenly urged the mercantile and trading interests to take the

Liskeard, Lostwithiel, St. Austell to Truro and Falmouth. Connections would be made with already-existing railways and the proposed West Cornwall Railway from Truro to Penzance. The engineer was Captain Moorsom and £250,000 was to be contributed by the three supporting railway companies and the Bristol and Gloucester collectively. The Cornwall and Devon Central announcement was published on November 18. It adopted the well-known central route, required a capital of £1½ million and had retained Joseph Locke as its engineer. W. J. Chaplin (chairman) and seven of his fellow London and South Western directors were members of the Provisional Committee.

Cornwall Railway Favoured

The first setback to the C. and D.C. occurred on December 31, 1844, when the Board of Trade reported against it and in favour of the Cornwall Railway. To save unnecessary expense, the Bill was withdrawn and an approach made to the Cornwall with a suggestion for amalgamation of routes near Bodmin, whereby the best of each would be utilised. This was politely declined on January 31, 1845. The C. and D.C. continued in existence until 1847, when it gave up the struggle and expired.

Hearing of evidence on the Cornwall Railway Bill occupied the parliamentary committee for seven weeks. Moorsom explained that the Hamoaze would be crossed by a boat 58 ft. long, carrying two lines of rails to accommodate six carriages and a locomotive. It would be propelled by chains and a windlass. I. K. Brunel, called by the promoters, described the arrangement as "perfectly safe"; Locke, Robert Stephenson and G. P. Bidder thought decidedly otherwise. Sir Charles Napier, for the War Office, said the line was no use unless it could form a part of coast defences and be fortified with Martello towers! Though the preamble was proved, the House of Lords Committee announced on July 19 that they thought the Bill should not be proceeded with until a more accurate survey was available and crossing of the Hamoaze avoided.

Brunel as Engineer

A new survey was undertaken by Brunel, now appointed the company's engineer. He proposed a high bridge over the River Tamar at Saltash, some two miles above Torpoint, and from St. Germans a route very similar but on slightly easier gradients to that taken by Moorsom. Brunel defended his new plans in a fire of cross-questions in the Lords' Committee. No gradient would be steeper

(Continued on page 6)



Kingsferry Bridge, Kent

being built for the Kent County Council by John Howard & Company Limited. The contract is well ahead of schedule.

John Howard
spans the world

JOHN HOWARD & COMPANY LIMITED - CIVIL ENGINEERING CONTRACTORS
13 BUCKINGHAM GATE - LONDON SW1

CLASSIFIED ADVERTISEMENTS

Situations Vacant

To attract the worthwhile applicant use a "Situations Vacant" advertisement in the classified columns of MODERN TRANSPORT.

Rate: 6d. per word. Use of Box Number 2s. extra.

CLASSIFIED ADVERTISEMENTS
MODERN TRANSPORT, 3-16 WOBURN PLACE, LONDON, W.C.1

RAIL TRACTION HYDRAULIC TRANSMISSION

TYPE RRK2



COMBINING IN ONE COMPACT UNIT
TORQUE CONVERTER
FREEWHEEL
CHANGE SPEED GEARBOX
AUTOMATIC CONTROL

SELF-CHANGING GEARS LIMITED

Patentees and Makers of the Wilson Gearbox

LYTHALLS LANE • COVENTRY • ENGLAND



than 1 in 60, whereas the old route had stretches of 1 in 40. His 63-mile line could be built for £1,600,000 and the Tamar bridge would be about 95 ft. above mean high-water mark, 10 ft. above the height required by the Admiralty.

The preamble was proved on July 25 and the Cornwall Railway Act, incorporating the company,

(Padstow) and river quays at Truro and Penryn, were also included. The principal proprietors were all well-known in the county, Treffry, Robartes, Carlyon Tweedy, Fox, Carne and Vivian, a fact which must have inspired the lesser shareholders and helped to maintain confidence in the anxious days which lay ahead of the company. But it was

responded to and large numbers of shares had to be declared forfeit. The modest beginning on the works between Truro and St. Austell was halted at the end of 1847 and not resumed until fresh contracts had been let on July 30, 1852; meantime, on March 26, 1852, the Board of Trade had issued a warrant allowing abandonment of the branches and

though overbridges and earthworks were optimistically made for double track. This decision was to save much expenditure when the line was doubled 40 years later. Money was still desperately short. Had it not been for the help given by the associated companies, the whole undertaking would have been abandoned. This help, essential though it was, had the effect of tightening the grip of the "foreigners" and affronting sturdy Cornish independence. But it was inevitable, and wisely accepted as such.

Bridge Contract

The contract for Saltash Bridge was let in January, 1853, to C. J. Mare for £162,000. He was well known to Brunel as a shipbuilder at Blackwall and also as the principal contractor for the iron-work of the Britannia Bridge on the Chester and Holyhead Railway. Brunel made certain alterations to his original plan for the bridge and finally decided upon having only one central pier and two spans of 465 ft., later reduced to 455 ft. The height of 100 ft. now required by the Admiralty was also incorporated. Preliminary borings to ascertain the nature of the hard greenstone trap rock foundation were carried out in 1848-49 but, because of the company's financial plight, nothing further was done until the summer of 1852. By then it had been decided to save more than £100,000 by constructing it for a single line only.

In June, 1854, the great cylinder, incorporating a diving bell, which Brunel had designed for building the underwater portion of the central pier, was towed out into the river. The foundation of the first land pier was laid at Saltash on July 4. Following the failure of the contractor in October, 1855, the company took the works into its own hands. The two great trusses, each consisting of a wrought-iron oval tube 12 ft. 3 in. high and 16 ft. 9 in. broad, were built on the Devon shore. When complete, each was 455 ft. long and 56 ft. high and weighed 1,060 tons. The western span was floated on pontoons to its site on September 1, 1857, and slowly raised as the piers were built up. On July 10, 1858, the eastern truss was similarly dealt with. Brunel reported the work as completed on February 23, 1859, and the great bridge ready for testing. In all, 11 years had been occupied in its erection; the total cost was £225,000, some £63,000 more than Mare's contract price for a double-line structure.

(To be continued)



Royal Albert Bridge, Saltash, looking north-west from the foreshore near St. Budeaux

received Royal Assent on August 3, 1846. With a capital of £1,600,000 it was empowered to construct the main line of railway as planned, from a junction with the South Devon at Plymouth, through Saltash, Lostwithiel and Truro to Falmouth; branches to the existing Liskeard and Caradon Railway, to the Bodmin and Wadebridge (which might be purchased and extended to

already securely tied to the "associated companies," as the Great Western, Bristol and Exeter and South Devon were known; these were subscribing nearly one-third of the capital and had seven directors representing them on the Cornwall's board.

The aftermath of the Railway Mania in 1845-46 hit the Cornwall Railway severely. Calls were not

contingent reduction of the capital to £1,125,000. On May 5 a circular was sent to the shareholders urging them to have faith in the directors' determination to complete the line. It pointed out that Falmouth was still a first-class port which had handled 1,324 vessels in 1851.

And so construction work restarted, but on a single line only, with passing places at stations,

NEW L.T.E. GARAGE

Permanent Premises at Stevenage

THE new London Transport garage at Stevenage, facing the New Town Centre in Danestrete, was opened officially on April 27, and came into full use on April 29. It is the second of a new design, specially evolved for use in the country area, to be opened within a few weeks, the first having been brought into use at Hatfield on February 18, as recorded in MODERN TRANSPORT at the time.

The new garage has its frontage on Danestrete and lies between Danestrete and the Great North Road, very near the New Town Centre. It takes the place of the small and inadequate temporary garage in Fishers Green Road, Stevenage, which has been in use since 1955 and is now offered for sale. It is also taking over most of the bus and



The new L.T.E. garage at Stevenage seen from Danestrete

coach services formerly worked by Hitchin garage, which has also been closed and is offered for sale.

The design provides for a covered parking area flanked by workshops and stores, with administrative offices and a public inquiry office housed in a separate single-storey building. This 145-ft. long administrative block fronts on to Danestrete and is set in flower bed and cobblestone surrounds. At the right hand end is an entrance for the public leading to the inquiry office and the building also houses the traffic offices, staff rooms and a canteen. Behind it, with a service roadway between, lies the covered bus park. This provides a clear floor space 185 ft. by 98 ft., sufficient to take 49 buses, and the design provides for a further 16 vehicles to park in the open, thus giving the garage a total capacity of 65 vehicles.

Parking Area Layout

This main parking area is spanned by tubular steel trusses, 98 ft. in length, with no central supports to impede vehicle movement. Above a low brick wall, the building is clad with vertical asbestos sheeting. The roof is covered with a 5-deg. pitch asbestos cement trough construction. Natural lighting is provided by vertical glazing at high level round the building augmented by a long central roof-light. Buildings flanking the main parking area and opening into it, contain foremen's offices, workshops, stores, lavatories, and a women's changing room for the use of female engineering staff. London Transport's standard equipment for automatic refuelling, lubricating, and vacuum cleaning is provided, as well as an Essex bus-washing machine and Eco roof washer. The fuelling points are supplied with diesel oil from three 5,000-gal. overground tanks in the open alongside the parking area wall. The usual compressed air ring main is provided. The pit area at one end of the building is enclosed on two sides by the outer walls and on a third by a glazed screen 17 ft. 6 in. in height. The fourth side is open to the main parking area. The three pits are heated throughout their length and are fitted with fluorescent lighting. This type of lighting is installed throughout the parking area and the various shops. For the present, about 30 buses and Green Line coaches are operating from the garage.

The main contractor was Gilbert-Ash, Limited, London. The cost was approximately £150,000. The design for the garage was produced under the direction of Mr. Thomas Bilbow, architect, London Transport, and the engineering requirements are those of Mr. A. A. M. Durrant, chief mechanical engineer (road services), L.T.E.

FROM LOAVES TO LATE NIGHT FINALS



...carried unanimously



Eager lightweights for the local jobs—
Thames 5/7 cwt. vans make
short work of surprisingly large loads.

Style comes to vans—in a big way! Shape of the new Thames 10/12 and 15 cwt. is smart, functional: not an inch is unused, not a corner wasted. Driver comforts include car-styled cabs, with foam-rubber seating, finger-light steering, draught-proofed doors. Easiest engine and transmission access cuts routine service, means no wasted time off the road. Strongest build, with all-steel body and toughest, ladder-type chassis frame, means a longer, more profitable life. Operators vote unanimously: new Thames for extra savings, bigger profits!

BEST OF ALL: New Thames for low initial outlay. Check these prices for value: 10/12 cwt. £459, 15 cwt. £469 (in primer). See your Ford Dealer. Make the years-ahead choice today—Thames!

THAMES VANS BY FORD

BRITAIN'S BIGGEST SELLERS—THAMES VANS AND TRUCKS

ROAD VEHICLE INDUSTRY

Large One-Ton Commer Van

EXCEPTIONAL roominess and economy are features of a new 1-ton forward-control van introduced by Commer Cars, Limited. With a 280 cu. ft. steel body, the vehicle is similar in appearance to the existing 1½-ton Commer van, with which many parts are interchangeable. It has a 9 ft. 3 in. wheelbase and is available with either a 48.5-b.h.p. diesel engine or a 56-b.h.p. petrol unit, the latter being fitted if required with chrome bores. Interior body dimensions of the vehicle are length 9 ft. 2 in., width 5 ft. 6 in. and height 5 ft. 6 in.

Improved Etching Primer

NOW being marketed by Federated Paints, Limited, Glasgow, is a much-improved version of the original Strathclyde etching primer. It is claimed to be the first one-can ready-for-use type to be manufactured in this country and has recently received Admiralty approval for use on non-ferrous metals. Named Strathclyde etching primer PA-10 the new material is said to be equally effective applied by brush, spray or by dipping and by any of these methods it air dries in 30 min. It can be stoved for quicker drying. Phenomenal adhesion to ferrous and non-ferrous metals, more than double that of a conventional metal priming paint, is claimed.

Leyland-Engined Seddon

LONG-wheelbase lorry, tipper and articulated tractor versions are available of a new 7-ton capacity range of chassis recently introduced by Seddon Diesel Vehicles, Limited, Oldham. The range is designed for gross weights of 11 tons solo



International Harvester 1-ton Metro-Mite van, first of its size built in America, has British B.M.C. A55 petrol engine and gearbox (described in our November 1, 1958, issue)

and 16 tons with articulated trailer and is powered by the Leyland O350 diesel engine developing 105 b.h.p. at 2,400 r.p.m. The chassis price is £1,528.

Study of Brake Performance

ENTERED by Ferodo, Limited, with the object of making an investigation of braking performance of both towing and towed components, an Austin Gipsy four-wheel-drive utility



Charrold body on Ford Thames 7-ton Trader operated by London Co-operative Society has inbuilt bagging and weighing and an automatic bag counter; right, one of four Leyland Super Comet tractors with Thompson Bros. tank trailers for Portuguese Shell. Three are of 2,420-gal. capacity and one has Thompson Bros. pneumatic trailer suspension; one has a capacity of 3,520 gal.

vehicle towing a Cresta caravan took part in the recent British Caravan Road Rally. A complex set of instruments installed in the back of the Gipsy recorded comprehensive data including performance, pedal pressures and the number of applications, while a cine camera linked to the equipment made a continuous film of dial readings. Results of the tests are now being analysed.

Plastics-Fronted Walker Van

MOUNTED on a Morris-Commercial LD diesel-engined chassis, a laundry van recently developed by B. Walker and Son, Limited, Watford, has a total body capacity of 525 cu. ft. in an overall body length of only 15 ft. 8 in. A feature of the van is a glass-reinforced plastics front with curved windscreens that provide excellent visibility.

Paris Motor Show

IN order to stop persistent rumours that the Paris Motor Show was in future to be held at the new exhibition centre at the Rond Point de la Defense, on the outskirts of the city, the organising committee has stated officially with full sanction from the French Government, that future exhibitions will go on as usual at the Grand Palais, Champs Elysees. The 1959 event will be held there during the first 11 days of October, but the manufacturers of commercial vehicles, motor cycles and cycles at their annual general meeting decided that their show, which was always held concurrently at the Porte de Versailles with the motor car show, is not to go on this year but will next be held in October, 1960, and thereafter every other year only.

Chausson-Savien Agreement

EFFECTIVE this month is a new technical and commercial agreement recently concluded between the two French commercial vehicle producers, Chausson and Savien-L.R.S. (Latil, Renault and Somua). The agreement provides for joint design, manufacture and sales of buses and coaches produced by the two organisations, which between them accounted for 64 per cent of French

production during the past 12 months and together form the second largest producer of commercial passenger chassis in Common Market countries. The new alliance has been formed in order to strengthen the French manufacturers' position in the increasingly competitive European and world markets.

Ford May Fair

OPENING at the City Hall, Manchester, at noon on Friday, May 8, with Mr. H. Denne, director of sales, Ford Motor Co., Limited, officiating, is the Ford May Fair at which a comprehensive display of Ford cars, commercial vehicles, industrial tractors and engines will be made. The fair, which will include a fashion show, has been organised by H. and J. Quick, Limited, jointly with Manchester Garages, Limited, and H. E. Nunn and Co., Limited.

Portable Cable Tester

PATENT application has been made for a new portable cable test set particularly suited to use in confined spaces such as on vehicle, ship and aircraft wiring systems, which has been developed by Calidec, Limited, 12-15 Lupin Street, Birmingham, 7. The set is designed for simultaneous continuity and earth-leakage tests up to 3 megohms (up to 10 megohms to special order), having audible and visible indication of both types of fault. It is powered by standard types of portable-radio batteries.

Cheaper Screen Washer

COSTING only 27s. 6d., a new screen-washing kit is now available for the Bedford light van and its many conversions. Similarly low-priced kits for other vehicles in the Bedford range have also been announced. Manually operated by a simple control close to the driver's hand, this new equipment eliminates the need for any connections to the induction manifold. It has the added merit that the water container is so shaped that it can be fitted beside the engine, so that no space is taken up in the driving compartment.

How to Sell Abroad

TRAVELLING showmen are putting over British-made motor accessories throughout Europe as the mobile exhibition operated by Trico-Folberth, Limited, moves from one capital to another displaying its products in successive motor shows. Travelling recently from Geneva to Lisbon for the British Trade Fair, the unit made a long stop in Barcelona—and decided to stage its own motor show. A hall was booked in the Feria de Muestras, the well-known samples fair, and the Trico stand was erected and on show April 10 to 19. Visitors came from all over Spain at the invitation of FAESSA—Trico's Spanish agent—and business interest was extremely lively.

Small Hot-Spray Plant

JUST introduced by the Aerograph-DeVilbiss Co., Limited, 47 Holborn Viaduct, London, E.C.1, is a hot-spray unit designed for the smaller user. It comprises a quart-size paint cup which incorporates a 210-250 volt heating element and a standard connection for the majority of industrial suction-feed spray guns. Adaptors are available for varying thread sizes. The paint cup is intended for preheating of the contents for 7 min.

OFFICIAL ANNOUNCEMENT

EXHIBIT SPACE IS AVAILABLE

IN THE 42nd SCOTTISH MOTOR EXHIBITION

Under the Official Patronage of The Society of Motor Manufacturers and Traders

**KELVIN HALL, GLASGOW
13-21 NOVEMBER, 1959**

EXHIBITS:

1. Private Motor Cars
2. Light and Medium Commercial Motor Vehicles
3. Accessories, Components, Tyres, etc.
4. Transport Service Equipment
5. Heavy Commercial Vehicles

APPLICATION FORMS NOW READY. Ballot for Space Meeting—2 June, 1959
All Applicants for Space (except Members of the Scottish Motor Trade Association) SHOULD APPLY AT ONCE for full particulars.

Telegrams: 'Motrade Edinburgh'
Telephone: Edinburgh CAledonian 3643

General Secretary: David L. Fairley, C.A.,
3 Palmerston Place, Edinburgh, 12

a better building at LESS COST



Typical Clearspan Garage of 73' 0" span. Note monorail over service pits on right.

Clearspan all steel buildings offer you the fastest and cheapest building technique. Why? Because Clearspan buildings are STANDARD, ready planned down to the smallest detail and jig built. The Clearspan range is almost unlimited and 'specials' are available to order. The Conder technical and erection service is ready to solve YOUR building problem. Send for illustrated brochure.



- * Spans up to 150 ft*
- * Height up to 25 ft.
- * Roof slopes 12° - 17° - 22°.
- * Lean-to's, Canopies, etc.
- * Hoists and Monorails.
- * Clean design - no dingy lattice work.
- * Virtually maintenance-free.

CONDER CLEARSAN

CONDER ENGINEERING CO LTD WINNALL WINCHESTER HANTS · TELEPHONE 5005
CONDER ENGINEERING CO (MIDLANDS) LTD PEEL HOUSE BURTON-ON-TRENT · TEL 5411



...offers LOADS MORE for the money!

Ideal for wholesale or retail delivery work with a tough all-steel factory-built body . . . capacity 280 cu. ft. (9' 2" x 5' 6" x 5' 6") . . . wide sliding side-doors for quick accessibility . . . easy to handle in crowded streets . . . choice of thoroughly proved and exceptionally economical power units, 56 b.h.p. petrol or 48 b.h.p. diesel . . . robust four-speed synchromesh gearbox designed for 'stop and start' delivery operations . . . powerful hydraulic brakes with liner area of over 200 sq. ins.

Ask your local Commer Dealer for a practical demonstration.

A ROOTES PRODUCT — BUILT STRONGER TO LAST LONGER!
COMMER CARS LTD. LUTON BEDS. EXPORT DIVISION: ROOTES LTD. DEVONSHIRE HOUSE PICCADILLY LONDON W.I.

PETROL VAN £723

Chassis/Scuttle £520

DIESEL VAN £843

Chassis/Scuttle £640

NEWS FROM ALL QUARTERS

Pullman Diesels Postponed

It is reported that introduction of the high-speed diesel multiple-unit Pullman trains between St. Pancras and Manchester Central has been postponed from the coming autumn until early next year, officially because the rolling stock will not be ready in time. It is also known that the N.U.R. has been opposing plans for this service because the refreshment facilities will not be provided by the usual railway dining-car staffs.

XXXX

Slotted Angle for Night-Safe Systems

Night-safe systems have been constructed by the Lincolnshire Road Car Co., Limited, largely of Dexion 140 slotted-angle section. A bank of 88 safes faces on to the conductors' paying-in room and backs on to the ticket-office. Each safe is fitted with a combination lock. As a conductor finishes his shift he unlocks his safe, deposits the day's takings in a specially fitted cashbox and relocks the safe. Similar safe-systems are now in use at the Lincoln, Grantham and Scunthorpe garages of this company.

XXXX

British Standards for Rails

A completely new family of railway rails ('sections') comes into being with the issue of revised editions of B.S.11: 1959, "Flat bottom railway rails," and its related publication B.S.47: 1959, "Steel fishplates for railway rails." The new rails are those in the weight range of 65 lb. per yard up to and including 110 lb. per yd., and will be referred to as the "A" series. Sections remain unaltered for rails in the 25-55 lb. per yard range, as they do for the 60 lb. per yard rail (specified by an amendment to the previous edition.)

XXXX

Political Railway for East Germany

The Deutsche Reichsbahn, the State railway system operating in Eastern Germany, is to be renamed the Sozialistische Eisenbahn, or the Socialist Railway, according to a correspondent quoting the East German Ministry of Transport. After the 1939-45 war, that part of the German rail system in the newly formed Federal Republic of Germany took over the name of Deutsche Bundesbahn, or German Federal Railway, but the sector in the so-called German Democratic Republic, or Eastern Germany, oddly retained its old name Deutsche Reichsbahn (German State Railway), despite the imperialistic connotations.

XXXX

Extra-Mural Rail Excursions

Three Saturday afternoon excursions from Glasgow over pioneering railway routes have been arranged by the Scottish Region in connection with a special course of five lectures on early canals and railways being given at Glasgow University. Today (May 2) an ex-Caledonian Railway train leaves Glasgow Central for Kirkhill, Lesmahagow, Stonehouse, Strathaven, Larkhall Central, Hamilton Central, Motherwell and Bellshill. On May 16 the excursion will be from Glasgow Queen Street to Aberfoyle and back and a week later from Queen Street to Back o' Loch Halt, for an inspection of Kirkintilloch basin on the Forth and Clyde Canal and Maryhill locks.

XXXX

Lisbon Bridge Tenders Invited

Tenders have been invited by the Portuguese Government for a large bridge across the Tagus near the centre of Lisbon. It will be of the suspension type; the river at this point is some 2,000 yd. wide. Alternative bids are sought for a road and a road and rail bridge.

XXXX

Torpoint Ferries

An order has been placed with John I. Thornycroft and Co., Limited, by Cornwall County Council for the construction of two replacement ferries to operate at Torpoint. They will be 182 ft. in length over prows and 102 ft. hulls only with a breadth of 54 ft. Diesel-electric machinery will provide the motive power.

XXXX

Leeds Tram Donated

Leeds Corporation Transport Committee is presenting tramcar No. 399 to the Leeds Tramway Historical Society, which had made a request for it. The Society plans to run it on the Tramway Museum Society's line at Ambergate in Derbyshire. Tram No. 399 was the last built by Leeds City Transport, and that was over 30 years ago.

XXXX

Charing Cross and Strand Stations Again

While admitting that the present names are not ideal, London Transport has firmly resisted a suggestion by Westminster City Council that the names of Strand and Charing Cross Underground stations should be altered because they are misleading. This is only the last of innumerable occasions on which a change has been urged; one of the difficulties involved is to find a new name for the present Charing Cross Underground Station that would not itself be misleading.

XXXX

Rhodesia Railways Deficit

It is thought likely that Rhodesia Railways will finish the current financial year, ending June 30, with an overall deficit of about £2 million. Factors which contribute to this shortfall include the general fall off in traffic during 1958, the cost of the big development programme which was started before the effects and extent of the trade recession became obvious, loan repayments of about £5 million and loss of about £200,000 revenue through the copper strike in 1958. The position latterly appears to be improving; the railway had an operating surplus of £113,197 in December, 1958.

XXXX

Explorer Diesel Locomotive in East Africa

The superstructure of the first main-line diesel-electric locomotive to arrive in East Africa was recently unloaded at Mombasa. The complete locomotive is expected to be assembled by June. It is of the Explorer class manufactured by the British Thomson-Houston Co., Limited, at Rugby, and is a 1,100-h.p. mixed traffic unit. It was sent at the suggestion of B.T.H. for testing by East African Railways and Harbours. The locomotive will be operated in the port area of Mombasa then from Mombasa to Voi and later up-country; it has been designed for use on the lighter type of railway in countries outside of Britain and a description appeared in our February 21 issue.

You take the
HIGHROAD

There is no other tyre made

that can give you a

greater return in mileage

and performance

AVON

THE THRIFTY-EST HIGH QUALITY TYRE EVER PRODUCED



DOUBLE REINFORCED BUTTRESSES

You take the 'HIGHROAD' and get great strength throughout the shoulder region with protection from tread chipping caused by kerbing or backing on to ramps, ensuring maximum tread life.

ANTI-STONE-TRAPPING GROOVES

You take the 'HIGHROAD' and see how its narrow grooves of special design will not pick-up or carry destructive stones. The groove bases are also shaped to resist tread cracking.

LATEST TREAD COMPOUND

You take the 'HIGHROAD' and get up to 10% more tread rubber than in previous standard AVON giants — compounded by advanced high-quality techniques.

UNBROKEN RIBS You take the 'HIGHROAD' and get even—and therefore economical—wear across the whole width of the tread. Recessing gives cool running in the shoulder region.

ANTI-SKID NOTCHES

You take the 'HIGHROAD' and you experience new safety. Multi-directional notches in all tread ribs give powerful resistance to skidding at all loads on all road surfaces.

COMMERCIAL AVIATION

B.E.A. Again Makes Profit

SUDAN AIRWAYS PLANS

In spite of the serious recession in air traffic last year, British European Airways made a profit for the financial year which ended on March 31, 1959, and this was its fifth profitable year in succession. Giving this news in his latest message to the staff Lord Douglas of Kirtleside, the chairman, writes: "This is a great achievement in which everybody in the Corporation can take legitimate pride. The worldwide recession in traffic proved to be even more serious than we expected. Passenger traffic on the western world's scheduled airlines increased in 1958 by only 5 per cent over 1957 level and B.E.A.'s increase was little better than the world average. This compares with an average increase of 16 per cent in the previous 10 years. Conditions were even more difficult because, at the low-point in the recession which for B.E.A. occurred during the critical peak summer months, our traffic was actually less than during the corresponding period in the previous year." Referring to the importance of keeping expenditure under control by keeping staff numbers at an absolute minimum "despite an increase in output of no less than 14 per cent," Lord Douglas writes: "Thanks to the loyalty and enthusiasm of everybody in the Corporation we managed to do this."

Final figures were not yet available but preliminary estimates showed that B.E.A. made a small profit on the year after paying all interest charges. During the year more than 180 million capacity ton-miles were offered for sale and over 108 million load ton-miles sold—a load factor of 60 per cent. Passenger-miles rose to 988 million. Traffic results for March were the most encouraging we have had for many months . . . partly due to Easter coming early this year. Easter traffic itself broke all records with no fewer than 115,000 people travelling by B.E.A. during the holiday fortnight—3 per cent more than the previous highest in 1957. Two important additions to the B.E.A. network this summer were a twice-weekly Viscount 800 service from London, via Munich, to Klagenfurt in Austria, starting on June 1, and the twice-weekly London—Moscow service by way of Copenhagen to be operated by mixed-class Viscount 806 aircraft and scheduled to start on May 14.

Guinea Joins I.C.A.O.

The Republic of Guinea became the 74th member state of the International Civil Aviation Organisation on Sunday, April 26, 30 days after its instrument of adherence to the Convention on International Civil Aviation was deposited.

German Orpheus Agreement

An agreement was signed recently in Coblenz between the Federal German Ministry of Defence and Bristol Siddeley Engines, Limited, providing for the manufacture under licence in the Federal German Republic of the Bristol Siddeley Orpheus 803 turbojet engine. In all, the Orpheus has been specified as the power plant for 14 different aircraft. Licence agreements have already been concluded for its manufacture in France, Italy and India.

Viscount Success with Pluna

The one Vickers Viscount V810 currently operated by Pluna, the Uruguayan airline, between Montevideo and Asuncion (725 miles) and between Montevideo and Buenos Aires (137 miles) carried nearly 30,000 passengers in the 6 months ended January 31, 1959. The average passenger load factor on the Asuncion service for that period was 73.9 per cent and on the Buenos Aires service (which started last September) it had been 82.6 per cent, while the overall passenger load factor for all flights of the Viscount had been 78.2 per cent. By January the aircraft was making 222 flights a month at 82.7 per cent load factor besides carrying freight and mail.

Irish Traffic in 1958-59

Over half a million passengers were carried by the Irish Air Lines in the financial year ended March 31, 1959. In addition to these 515,355 passengers, the Irish air companies also flew 9,077 tons of cargo and mail during the year. On European services Aer Lingus carried 500,574 passengers, 7,277 tons of cargo and 1,688 tons of mail. Passenger traffic was 59,200 higher than the previous year, while cargo rose by 700 tons. Mail traffic decreased by 77 tons. Passengers carried on transatlantic services during the year totalled 14,781. Aerlinte Eireann began transatlantic operations in April, 1958, with a service linking Dublin and Shannon with New York, and in October the service was extended to Boston.

New Services Approved

The Minister of Transport and Civil Aviation, after considering the recommendations of the Air Transport Advisory Council, has approved the operation of the following services:

An inclusive tour service between Lydd or Gatwick or Manton and Lyon; Silver City Airways, Limited, from April 1, 1959, to October 31, 1959, and for corresponding periods in 1960 and 1961.

An inclusive tour service between London (Blackbushe) and Palma; Eagle Aviation, Limited, from April 17, 1959, to November 1, 1959, and for corresponding periods in 1960 and 1961.

An inclusive tour service between London (Blackbushe) and Innsbruck; Eagle Aviation, Limited, from May 15, 1959, to September 20, 1959, and for corresponding periods in 1960 and 1961.

An inclusive tour service between Southend and Palma; B.K.S. Air Transport, Limited, from May 23, 1959, to October 11, 1959, and for corresponding periods in 1960 and 1961.

Sudan Airways Plans

Plans were announced last week by Sayed Abdel Bagi Mohammed, general manager, Sudan Airways, for a new scheduled air service between London and Khartoum to be operated with Viscount 831 aircraft, maintained and crewed by Airwork. To be called the Blue Nile Viscount, the new service is scheduled to start on June 8, and will operate via Rome, Athens and Cairo to Khartoum at an initial once-weekly frequency departing Gatwick Airport on Mondays. The service will arrive in Khartoum on Tuesdays after a total elapsed time of 16 hr. 50 min., and the aircraft will then operate two scheduled flights between Khartoum and Cairo before departing again for London on Thursdays. Accommodation is for 53 tourist and 8 first-class passengers, and traffic rights have been secured between all intermediate points on the route. Sudan Airways was formed in 1946 with the assistance of Airwork, which has been connected with it ever since. With its fleet of Dakota and Dove aircraft, it operates a network of internal services within the Sudan as well as to Aden, Saudi Arabia, Egypt and Ethiopia. During 1958 it carried 33,834 passengers and 631,376 kg. of freight. Application has been made for membership of I.A.T.A. and confirmation is expected shortly. The Sudan is already a member of I.C.A.O.

ROYAL ALBERT BRIDGE CENTENARY



ISAMBARD KINGDOM BRUNEL

• • • • •

The genius of Isambard Kingdom Brunel as a civil engineer is enshrined for all time in the physical features of the main routes of the Western Region of British Railways and nothing typifies the spirit of his age better than his last and most striking work, the Royal Albert Bridge at Saltash, which was opened 100 years ago today by the Prince Consort and which represented the conclusion of a long struggle to link Cornwall with the rest of the country by rail. The designer, alas, was too ill to be present at the ceremony and his death three months later at the early age of 53 turned triumph to tragedy. He was born on April 9, 1806, at Portsmouth, Portsmouth, and educated at Chelsea, Hove, and the College Henri Quatre, Paris. When 17 he entered the office of his father, Sir Marc Isambard Brunel; there he assisted in the preparation of plans for the construction of the Thames Tunnel. Work began in March, 1825, and in October, 1827, he was appointed resident engineer. In 1831 designs which Brunel had submitted for the bridging of the Avon Gorge at Bristol were accepted and he was appointed engineer for the carrying out of the project, which was, however, still unfinished at the time of his death, and was eventually completed as a memorial to him. Nevertheless, the Avon Gorge project was a turning point in his life, for it brought him into contact at Bristol with the promoters of the Great Western Railway, and thus led to his appointment at the early age of 26, on March 7, 1833, as engineer for the construction of that system. Inside three months he had prepared a survey of the proposed route and the construction estimates. He then applied himself to the problem of designing the 7-ft. gauge track and equipment in the hope of making possible speeds of 100 m.p.h. Although that was not achieved in his day, his positive successes were great and included the daring flat brick arches at Maidenhead (1839); Box Tunnel, and the viaducts between that structure and Bristol (1841); the timber viaducts in Devon, Cornwall and South Wales; and, outstanding among them all, the Royal Albert Bridge high above the Tamar. Apart from railway engineering, he achieved fame as the designer of steamships, the "Great Western" (1838) being the largest vessel then afloat and the first to make regular voyages under steam across the Atlantic, whilst the "Great Britain" and the "Great Eastern" were also equally famous in their day, although the anxieties caused by the commercial failure of the last-mentioned Leviathan played their part in ruining his health. He also constructed dock and harbour works at Milford Haven, Bristol, Plymouth, and elsewhere, and designed small arms, artillery, and military hospitals for use during the Crimean War. Brunel died on September 15, 1859, and was buried at Kensal Green Cemetery in a plot adjoining the main line of the Great Western Railway. The centenary celebrations this weekend in the Plymouth area include an exhibition of Brunel relics.

ALUMINIUM PRODUCTION

Development in New Zealand

POLICY DETERMINED

OUTCOME of discussions between Northern Aluminium Co., Limited, and the New Zealand Government lasting several months is an announcement by the company that it will shortly establish a new branch of its aluminium fabricating industry in New Zealand. The new plant will have an initial production capacity of 5,000 tons of aluminium sheet and foil products and 2,000 tons of aluminium wire and cable for electrical transmission lines a year. The location of the plant has yet to be decided; alternative sites in the North and South Islands of New Zealand are being considered.

Northern Aluminium Company, of England, being a fully owned subsidiary of Aluminium, Limited, of Canada, is backed by the technical and financial resources of that leading group in the international aluminium industry. As the primary aluminium to be used in the New Zealand plant will be supplied from Canada, this new development is an outstanding example of Commonwealth co-operation in industrial progress. The project will require a total investment of approximately £2 million, almost the whole of which will be provided by the Canadian and English companies, Aluminium, Limited, and Northern Aluminium Co., Limited. The plant will incorporate the best techniques from British and Canadian experience and will be planned to supply practically all New Zealand's requirements of sheet and cable products and to allow for expansion in all fields as required.

It is expected that this new industry will become of increasing importance to the New Zealand economy, since among its products will be aluminium sheet for roofing and siding in building construction, for vehicle bodies of all types and for the household equipment industry. Additionally, it will cater for the packaging industry and supply many types of electric cables for power transmission. The general manager of the New Zealand branch will be Mr. T. E. L. Ashley, who has spent over 30 years in the aluminium industry in England and has been manager of the Northern Aluminium plant at Banbury for the past 25 years.

NEW TYPE 4 DIESEL

(Continued from page 3)

In proportion to and in synchronism with the application of the vacuum brake on the train. It also releases the air brake on the locomotive in proportion to the increase in vacuum in the vacuum train pipe and is, therefore, in synchronism with the release of the vacuum brake on the train. In addition to conventional sanding an anti-slip brake is fitted. This generally assists starting under bad adhesion conditions. Separate operating switches are provided for the anti-slip brake and for sanding.

Engine

The engine is a Sulzer 12LDA28 twin bank pressure-charged 12-cylinder four-stroke type rated at 2,300 h.p. at 750 r.p.m. In later locomotives some of the engines will have an increased rating of 2,500 h.p. at 750 r.p.m. with a test-bed rating of 2,750 h.p. The first 10 engines are being supplied from Sulzer Bros. works in Switzerland and the remaining 137 are being manufactured by Vickers Armstrongs (Engineers), Limited, Barrow-in-Furness, to the order of Sulzer Bros. (London), Limited. They are the largest type in the Sulzer range of rail traction engines and many of the parts are identical and interchangeable with those fitted in the six- and eight-cylinder engines supplied for the type 2 and type 3 locomotives.

The cylinders are arranged in two vertical banks of six, each bank with its own crankshaft driving a common output shaft through straight spur gearing. A step up ratio is employed in the gearbox to increase the main generator speed to 1,080 r.p.m. at full load. Pumps for cooling water circulation, lubricating oil priming and fuel transfer are all driven by a single traction-type electric motor and can be run independent of the engine. The generator group is coupled to the synchronising pinion of the diesel engine and is mounted on an extension of the engine framing.

Generator and Motors

The main generator is a 10 pole, self-ventilated machine with a continuous rating of 1,531 kW, 580 volts, 2,640 amps. at 1,080 r.p.m. The auxiliary generator is an eight pole, self-ventilated machine with a continuous rating of 90 kW, 220 volts, 410 amps. at all speeds between 650 and 1,080 r.p.m. The main and auxiliary generators are combined, both armatures being mounted on a common hollow bottle-shaped cast steel rotor.

The six traction motors are series-wound force-ventilated machines with a continuous rating of 305 h.p., 440 amp., 580 volts and a one-hr. rating of 305 h.p., 485 amp., 530 volts and apart from the gear ratio are similar to those fitted in the type 2 and 3 locomotives with similar power equipment. The motors are axle-hung and are connected in permanent parallel across the main generator. They are force-ventilated by two motor-driven blowers, each of which has its own 11.5-h.p. motor arranged for two-speed operation of 1,180 r.p.m. or 2,380 r.p.m. The blowers are of the Aeron Hyperform type, each supplying 6,750 c.f.m. of ventilating air to three traction motors. The gear-wheels are of resilient construction and consist of a hub and toothed rim connected through rubber bushes which cushion mechanical shocks due to accelerating forces and track irregularities.

Control Gear

The control equipment is of Allen West manufacture and is housed in a dust-tight cubicle at the generator end of the engine compartment. Engine starting, traction motor and field weakening contactors are all cam-operated. The motor reversers are electro-pneumatic and the contactors for the auxiliary machines are electro-magnetic. The driver's control equipment in each cab comprises a master controller and instrument panel together with a set of three indicator lights "engine stopped," "wheel slip" and "fault." The cause of a fault indication is shown on a separate panel in the instrument cubicle.

The control scheme is fully automatic and the driver operates only one power controller. Movement of this from the idling position operates an air valve in the controller and increases the air pressures supplied to the engine governor which in turn increases the engine speed and output according to the position of the handle.

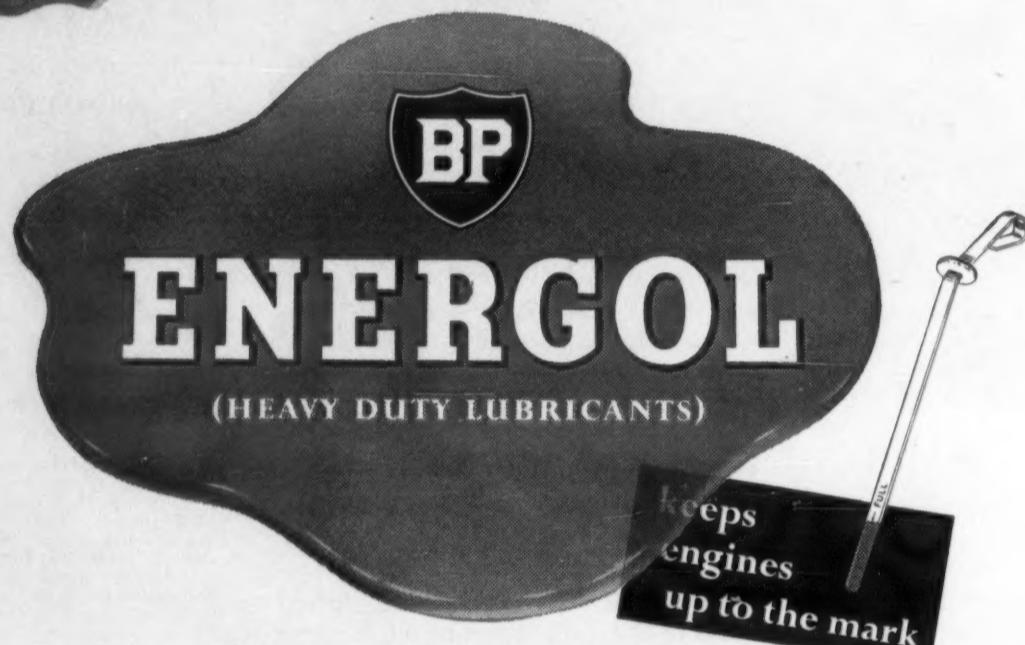
Keep your vehicles earning *not burning money!*



THE BP RESEARCH STATION ENGINEER SAYS—

"The suitability of a lubricating oil must not only be established by careful blending and analysis but by rigorous engine testing under extreme operating conditions. The BP research station conducts continuous day and night engine testing of lubricants under all possible operating conditions to ensure that BP Energol will give maximum engine protection and consequently longer engine life."

—use



BP Energol is a product of The British Petroleum Co. Ltd.

Distributed by THE POWER PETROLEUM CO. LTD.

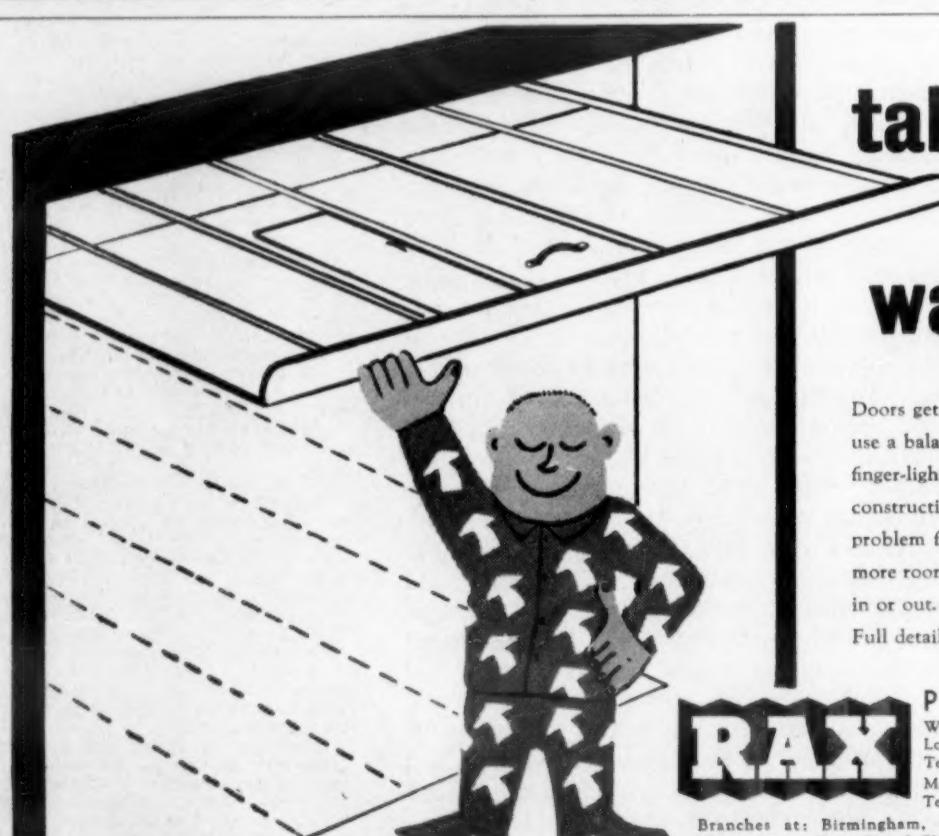
Head Office: 76/86 STRAND • LONDON W.C.2

Branches and Depots throughout the country

a subscription to MODERN TRANSPORT

brings you in touch with all

BRITISH AND FOREIGN TRANSPORT DEVELOPMENTS



**take the
easy
way out**

Doors getting in the way? . . . then use a balanced door. Good design, finger-light operation, and sturdy construction will remove your door problem for years to come. There's more room too for vehicles to move in or out.

Full details on request, to Dept. 4

POTTER RAX LTD
Wilton Works, Shepperton Road,
London, N.1
Tel.: Canonbury 6455 (4 lines)
Manchester: New Union St., 4
Tel.: COLlyhurst 2018

Branches at: Birmingham, Liverpool, Dublin, Belfast,
Newcastle-upon-Tyne, Bristol, Plymouth, Exeter.

LETTERS TO THE EDITOR

Road Caravan Coaches

The Editor is always glad to receive letters from readers on subjects germane to the transport industry, but these should be written as concisely as possible. The opinions expressed therein must not, however, be regarded as having editorial endorsement. Where correspondents desire to use a nom-de-plume it is essential that the Editor should be informed of the name and full address of the writer as indication of good faith.

Road Caravan Coaches

SIR.—May I confirm the opinion of Mr. Leworthy in your issue of April 11 that a rash of bus caravans round our coasts would do a great deal of harm to the caravan movement. In the early postwar years large numbers of old bus bodies converted into caravans of a sort were set up on the coasts and were undoubtedly a grave disfigurement of the scene. It is only with great difficulty that most of these eyesores have since been cleared up.

I recognise that your proposal is for something rather different, i.e. converted buses in running order and actually used to fetch the holidaymakers, but quite apart from the doubtful economics of the scheme, buses are so much designed as road vehicles that a group of them inevitably would look out of place standing on a caravan site. The majority of site owners would not admit them and I think their use would even be an infringement of the planning conditions in many areas.—Yours faithfully,

W. M. WHITEMAN,
Editor, *The Caravan Link House*, Store Street, W.C.1.

[The eyesores arose from uncontrolled and, no doubt, extremely private enterprise; bus companies are quite responsible undertakings and to maintain the amenities must be part of their mission in developing tourist traffic.—Editor, MODERN TRANSPORT.]

SIR.—Your excellent idea deserves more than mere dismissal from an "active member of the Caravan Club" (MODERN TRANSPORT, April 11). I have been a farmer, and know the value of site fees in terms of using tractors to get the caravan on and off hard standings. I know the difficulty of obtaining sites, and I have had several months of towing brakeless caravans in London and elsewhere. Trailer owners look down on bus caravans, but a company-owned one would be as smart as the service bus fleet.

Obviously bus companies might get sites to the detriment or exclusion of trailers, but the owners contribute nothing to the area, whereas the former provide unremunerative rural bus services to the existence of which caravans might make all the difference. As a caravan operator (in an area which wished to have no vans at all) I would disagree strongly with Mr. Leworthy's detailed reasoning on costs of conversion. If carried out in bulk at one company works for a group using existing workshop staff and equipment, and bulk purchasing of items, it should be nearer £150 than £300. Surplus stores are marvellous equipment providers.

Moderate Charges

Road tax is usually not more than £12 10s. annually; most companies have trade plates anyway. Insurance is low when bus is off the road and do not bus companies have special rates? Maintenance is offset by income tax and as to depreciation, has not the bus already paid for itself in service like a railway camping coach? When site fees are chargeable the tenant always pays these, as he does for gas supplies. Gas is available nationally from local agents; the company could pay the initial deposit on the first bottle. As to drivers' wages, if there are any idle spare crews the charge is nothing on the caravan account. Home garage charges are negligible if the bus stands out; this is not advisable as condensation is the caravan's worst enemy. £10 is, however, a high rent and £6-£7 plus site fees is nearer the mark except at high season. Buses can be used for housing construction workers out of season, if the companies work their caravans with the same flexibility as they do coaches or buses.

Concrete blocks work wonders for hard standings including levelling and they cost about 9d. each; cement is usually unnecessary. Drinking water is usually available and all caravans have a water tank or container. So far as sanitation is concerned B.T.C. companies have the advantage of being able to use disused railway stations as suitable sites, already fitted with lavatory accommodation. Cleansing services can be induced to empty Elsans, etc. There is, however, one problem: how to protect the tenants' privacy from the enthusiastic number snatchers on holiday!—Yours faithfully,

GEORGE BEHREND.

*The White House,
Rosel Harbour, Jersey.*

Timetable Clarity

SIR.—Although several correspondents to MODERN TRANSPORT have recently stressed the need for a revision of railway timetable layout, I find that even railway information offices themselves are unable to cope with the mass of tables and the subsequently confusing list of amendments necessary at bank holidays. Arriving from Norway on Easter Sunday and requiring a service to Birmingham, I was advised by the railway information officer to travel on the London train from the Tyne Commission Quay as far as York, and there board the 4.48 p.m. York—Bristol. However, at Newcastle Central the inquiry office insisted that the carriages from the Quay attaching to the 1.59 p.m. Newcastle—Kings Cross would not stop at York. The guard of the train subsequently confirmed that an extra stop would be made at York.

At York the inquiry office confirmed the information given at the Quay that the 4.48 p.m. to Bristol (T.C. 2.55 p.m. from Newcastle) would run through to Bristol, although this train actually terminated at Sheffield and passengers were made to change on to a later train. The 2.55 p.m. Newcastle—Bristol is shown in at least 10 separate tables in the timetables of three regions, the N.E.R., the L.M.R. and the W.R. The amendments to the L.M.R. tables were as follows:

Table No. 28: No amendment shown.
Table No. 180: " . . . (T.C. 2.55 p.m. Newcastle—Bristol terminates at Sheffield.)"
Table No. 184: "7.33 p.m. Derby—Bristol (T.C. 2.55 p.m. from Newcastle) will not run."
Table No. 217: "6.30 p.m. Sheffield—Derby will not run."
Table No. 218: "4.48 p.m. York—Sheffield (T.C. 2.55 p.m. Newcastle—Bristol) terminates at Sheffield."

All these references were, of course, to the same train. If so many information officials can get so confused over such a straightforward journey then one must either blame the staff or the complexity of timetable layout.—Yours faithfully,

JOHN VEALE.

Walsall, Staffs.

SEA LINKS WITH THE CONTINENT

20—By Eagle Steamers to France*

FOR over a century and a quarter the General Steam Navigation Co., Limited, has conveyed passengers between United Kingdom and Continental ports. The origin of the company, it may be recalled, goes back to 1820 when a small group of shipowners and business men interested in the London—Margate trade eventually agreed to its formation, operations commencing in 1824.

At this period the time was opportune for the short-sea trader as after the Napoleonic wars regular travelling on the Continent was renewed. Railway communication to the coast was as yet unestablished with the result that the company concentrated on passengers, taking great care to ensure their safety. In 1826 the ports of Calais and Boulogne in France were among those served from London, passengers joining the ship off the Custom House or Tower. Sailings to Calais were every Monday, Wednesday, Thursday and Saturday, in 12 hr. for a fare of 22s. 6d. (fore cabin) or 33s. (chief cabin). To Boulogne sailings were every

trips. At first, day travellers from England had to be content with a sight of the French coast in the neighbourhood of Cap Gris Nez but in 1955 permission was given to land passengers at Calais and Boulogne without passports, although in 1954 Eagle Steamers was operating, for the first time since the war, a service for passport holders from Gravesend and Southend to Boulogne.

It is satisfactory to record, therefore, that despite the great difficulties caused by rising costs and counter-attractions the number of tickets issued during the last two years has increased:

1957 season	261,500
1958 season	278,832

Continental services for the 1959 season will be:

m.v. *Royal Daffodil*. Commencing July 1. Wednesdays—From Gravesend (Stuart Road Pier), 8.30 a.m. Southend-on-Sea, 9.45 a.m.
To Calais, arriving about 2 p.m., returning about 5 p.m., due back at Southend approx. 9.15 p.m. and Gravesend approx. 10.15 p.m.

Saturdays and Sundays—From Gravesend (Stuart Road Pier), 8.45 a.m. Southend-on-Sea, 10 a.m.

To Calais, arriving about 2 p.m., returning about 5 p.m., due back at Southend approx. 9.45 p.m. and Gravesend approx. 10.45 p.m.

Fares—Gravesend to Calais or Boulogne.

40s. Day Return.

65s. Weekend Return } To Calais only.

75s. Period Return } Passports essential.

m.v. *Queen of the Channel*. Commencing June 13. Two to five sailings per week, not Thursdays, according to time of year to either Boulogne or Calais from:

Margate only.

Margate or Deal.

Ramsgate only.

Ramsgate or Deal.

Typical times from Margate or Ramsgate being 10 a.m. and from Deal 11 a.m. The French port arrival at about 1 to 1.30 p.m. allows up to five hours ashore, excursionists returning between approximately 5.30 and 6 p.m. for arrival at Deal at 7.30 p.m. and Margate or Ramsgate at 8.30 p.m. The day return fare is 37s. 6d.

On Thursdays there is a sailing from Clacton to Calais, at a day return fare of 40s. Day excursionists have to be at the piers 30 min. before sailing.

Identity Card Arrangements

In order to use the facilities offered by the no-passport regulations all the traveller has to do, provided he is a British subject or a citizen of the Irish Republic, is to obtain three passport-size photographs. These are attached to special identity cards which are issued at pier booking offices on the day of sailing, the blank details on the card being filled in by the passenger. Those who already hold valid British passports should, of course, use them to avoid the above formalities.

After the identity card is completed travellers pass through a ticket inspection, produce their passports or identity cards to the immigration official—who detaches first portion, answer the questions of the currency control official and embark. Further sections of the identity card are given up on arrival and departure from France and finally upon arrival back in England—the four parts being eventually married up. Holders of weekend or period returns require passports.

(To be continued)

GRAPHIC TOOL STEEL

Increasing Production by E.S.C.

INCREASING quantities of a graphitic type of tool steel are being produced by the tool steel department of English Steel Rolling Mills Corporation, Limited, Openshaw, Manchester. Known as MIC8, it is an oil-hardened tool steel having freedom from distortion in heat treatment equal to that of conventional carbon-manganese "non-distorting" steels, from which however, it is quite different in that it has a higher carbon content; by careful control of the analysis and metallurgical conditions of processing, a portion of the carbon is retained in the final product in the form of graphite particles uniformly dispersed throughout the structure.

The graphite particles act as a lubricant and considerably improve the material's machineability; they also reduce the tendency to seize, gall or score induced by the rubbing of metal against the surface of the tool. These unique properties combined with its uniform response to heat treatment and good hardenability make it ideally suited for components of intricate shape which have to withstand wear and abrasion. It is produced as rolled or forged bar, forged blanks and rings.



One of the modern vessels operating the Eagle Steamers summer services of the General Steam Navigation Co., Limited, is m.v. "Royal Sovereign"; she normally plies between London and Margate

Tuesday and Friday in 15 hr., fares being 26s. and 37s. respectively. It is of interest to note that Dieppe was also served at this time by sailings from the old Chain Pier at Brighton.

Prewar Situation

During the twentieth century, however, it has been the marine excursion trade in the summer months that has provided most of the passengers carried by the company. By 1939, by which time the New Medway Steam Packet Company had become associated, with its m.v. *Royal Daffodil*, *Royal Sovereign* and *Queen of the Channel*, regular services were being operated from London (Tower Pier), Tilbury (L.M.S. Pier), Medway piers, Southend-on-Sea, Margate, Ramsgate, Clacton and Great Yarmouth, to Calais, Boulogne, Dunkirk and Ostend. The latter service was of particular interest as a double facility was provided from Tower Pier, London, on Saturdays at 8.40 a.m. and 1.15 p.m. returning from Ostend at 11 a.m. Saturdays, 2 p.m. Sundays or 3.30 p.m. Mondays, fares for the full weekend being 27s. 6d. return for which passports were not required. Passengers could also travel by rail between Fenchurch Street and Tilbury or vice-versa without extra charge.

War losses were grievous but during the Dunkirk evacuation *Royal Daffodil* and *Royal Sovereign* brought back about 20,000 troops between them. Unfortunately the latter vessel was a wartime loss.

Postwar Development

After the 1939-45 war the pattern of today gradually became established but fully-developed passenger facilities to France have been greatly retarded by delays in agreements between governments concerning the operation of no-passport

* No. 19 appeared March 21.

TERRY'S Security Worm Drive HOSE CLIP



Our 100 years presswork experience has enabled us to produce a clip with all the tenacity of the Bulldog.

Immediate delivery of all Standard sizes from stock.

Sample and price list from Dept. MD

HERBERT TERRY & SONS LTD., Spring Specialists, REDDITCH, WORCS

REGULAR CARGO SERVICES

between
LONDON and



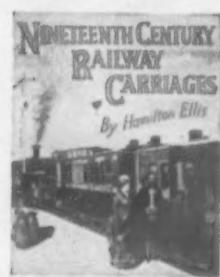
OFFICIAL NOTICE

MANCHESTER CORPORATION
WORKS SUPERINTENDENT

QUALIFIED works superintendent required by Manchester Corporation Transport Department to take charge, under the Works Manager, of the Department's central repair works, salary £1,065/1,220.

Forms of application and details returnable by Saturday, May 9, 1959, obtainable from the General Manager, 55 Piccadilly, Manchester, 1.

A UNIQUE HISTORY



PROFUSELY ILLUSTRATED

HAVE YOU YOURS?

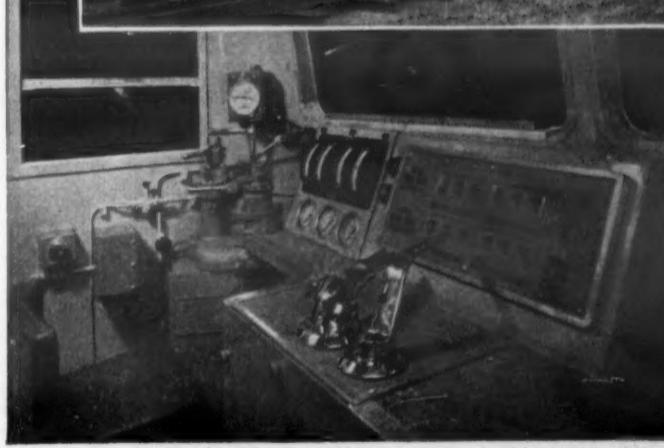
22s. INCLUDING POSTAGE AND PACKING

FROM PUBLISHER

MODERN TRANSPORT

3-16 WOBURN PLACE, W.C.1

FLEXIBLE OPERATING CHARACTERISTICS



Photos by courtesy of Metropolitan-Vickers Electrical Co. Ltd.

Forty of these mixed traffic electric locomotives built by Metropolitan-Vickers Electrical Co. Ltd. are operating on the Parramatta-Lithgow electrified system of New South Wales Government Railways.

Designed with flexible operating characteristics for a heavily graded route, and for multiple unit working from any driving cab, these locomotives are equipped with

WESTINGHOUSE

Type A.7EL AIR BRAKES

supplied jointly from the Australian and English Westinghouse factories

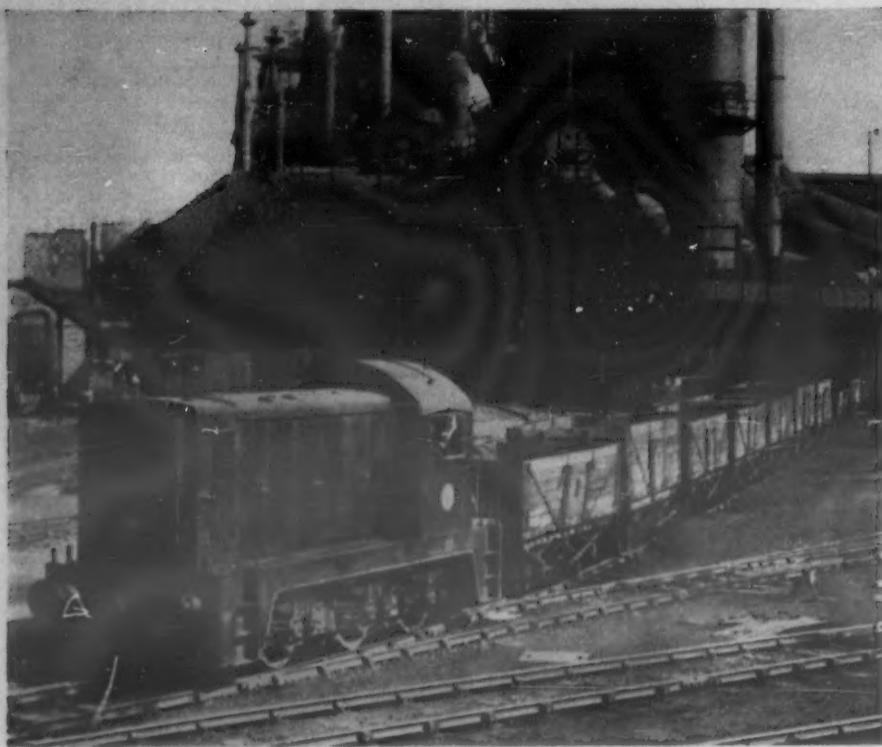
Westinghouse Brake and Signal Co. Ltd., 82 York Way, London, N.1

Associated in India with—Saxby & Farmer (India) Private Ltd., Calcutta

Associated in Australia with—Westinghouse Brake (Australasia) Pty. Ltd., Concord West, N.S.W.

Associated in South Africa with—Westinghouse Brake & Signal Co. S.A. (Pty.) Ltd., Johannesburg

Agents—Bellamy & Lambie, Johannesburg



PROVED RELIABILITY IN STEELWORKS OPERATION

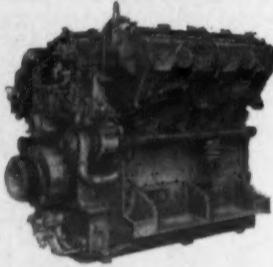
Sixty-five per cent of all steelworks diesel locomotives from 38 to 52 tons, now at work and under construction in Great Britain are powered by Paxman diesel engines. These locomotives operate with mechanical, electric or hydraulic transmission systems and have starting tractive efforts up to 35,000 lb. Locomotive builders adopt Paxman engines as standard units because of their interchangeability, essential and proved reliability, suitability to the heavy-duty work involved and the excellent service, spares and training facilities available.

DAVEY, PAXMAN & CO. LTD., COLCHESTER, ENGLAND

The Paxman 7" bore range, 130-1,000 b.h.p. is well suited for many applications and through a very practical approach to the question of standardisation, a high degree of interchangeability of wearing parts has been achieved. By this means only one basic set of spares need be held to service locomotives of varying sizes, with consequent saving in spares storage space and maintenance costs.

PAXMAN

DIESELS FOR HEAVY INDUSTRIAL SHUNTERS



In our issue for May 10, 1958, we briefly described a driverless trolley system named Robotug developed by E.M.I. Electronics, Limited, and reported that the Western Region of British Railways was to introduce two battery-electric trucks fitted with the robot control into experimental service at Newton Abbot goods shed. The two vehicles are now in use carrying goods which have been discharged from wagons to chosen points for loading into cartage vehicles for outward delivery.

The basic electronic guidance system operates by making a trolley follow a single wire, laid just beneath the flooring, having an alternating current of about $\frac{1}{2}$ amp. of a specified frequency passed through it. Fitted to the front of the truck is a

and every facet of the new method is being closely studied.

For the purpose of the experiment, nine tracks have been laid half an inch below surface and while it is not envisaged that anything so involved will normally be required, such provision has been made in order to test the system fully. To control the nine tracks, overhead panels have been provided whereby the dispatcher of a tug and train has merely to press the appropriate button to guide the driverless vehicle to any other given point on the shed.

Efficiency and Economy

Packages are discharged on the wagon side to a group of trolleys, all of which relate to a cartage



Simple push-button control for selecting any of nine experimental tracks along one of which (right) a driverless truck hauling loaded trolleys at B.R. Newton Abbot goods shed is seen moving

safety bumper so designed that if an obstruction is met, a microswitch opens the circuit, de-energising the interlock relay and halting the trolley. The truck can be operated in the normal way and driven manually if required.

Standard Railway Type

The platform truck used is of the standard railway-type Scott battery-electric vehicle, manufactured by Scott Electric Vehicles, Limited, Kidderminster, and a durability test of hauling a 3-ton load continuously for a distance of 2 to 3 miles at a speed of approximately 2 m.p.h. proved that the battery capacity of 121 amp.-hr. was sufficient to provide for the work to be carried out in an 8-hr. shift.

To relate this revolutionary method of control to the handling problems in a railway goods shed, experimental trials are being carried out over a period of several months to determine its practicability. The tests commenced on April 7, 1959,

post, and this train of trolleys will stand on the outside track, in order that the inside track can be utilised as a running road so as not to impede the free movement of loaded and empty trolleys to and from the cartage front.

The Western Region of British Railways has for some years now had practical experience of slot conveyor and power truck operation on its goods sheds and it is considered that the driverless-truck scheme will embrace the merits of both methods and produce greater efficiency and economy.

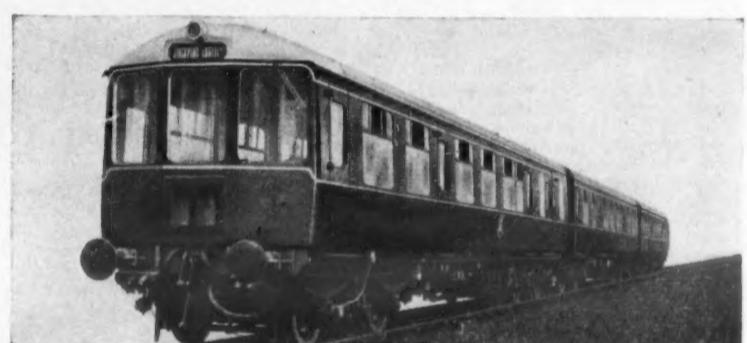
The Historic Commercial Vehicle Club is to test the reactions to suggestions by members that it should hold a meeting every month. To this end an informal meeting has been arranged for Friday, May 1, at the Railway Tavern, Liverpool Street, London, E.C.2, starting at 5 p.m. The meeting is being staged jointly with the Vintage Passenger Vehicle Society.



COMMONWEALTH RAILWAYS OF AUSTRALIA

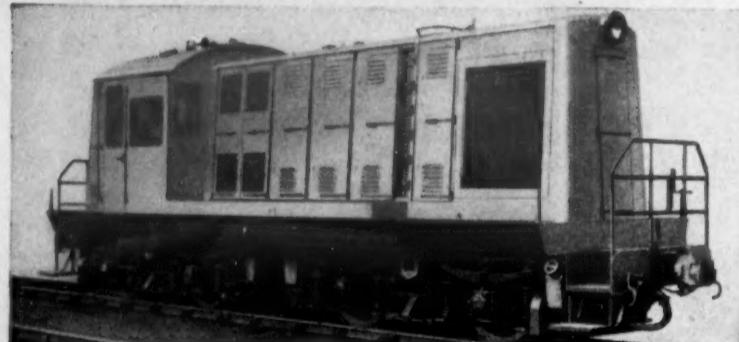
955 H.P. Diesel-Electric Locomotive (10 Ton Axle Load)

In collaboration with Sulzer Bros. (London) Ltd. and Crompton Parkinson Ltd.



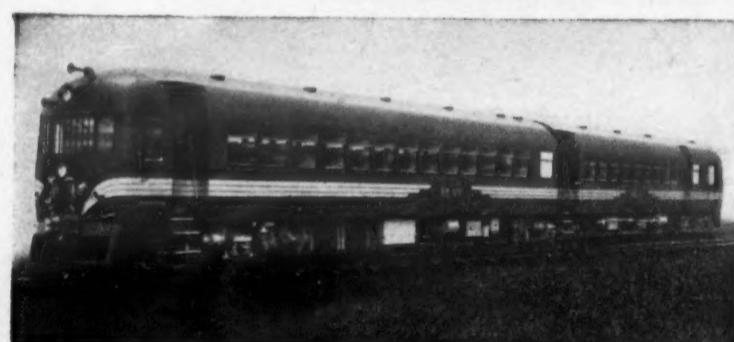
BRITISH RAILWAYS

Three Unit
Diesel Mechanical
Railcars



GHANA RAILWAYS

400 h.p. Diesel
Electric
Locomotive



NEW ZEALAND GOVERNMENT RAILWAYS

Twin Articulated
Diesel Mechanical
Railcars

In collaboration with The Dreswry Car Co. Ltd.



BRITISH RAILWAYS

1,160 H.P. Diesel-Electric Locomotive

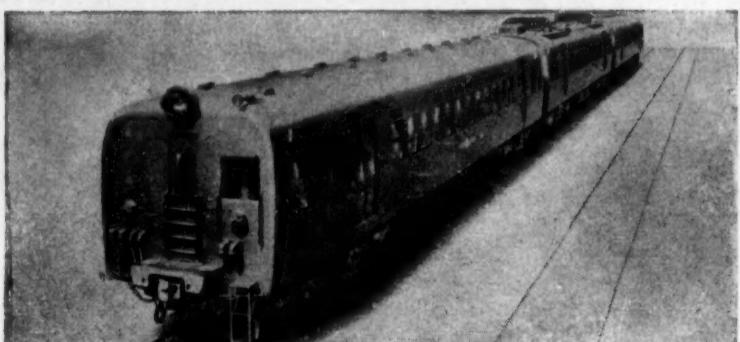
In collaboration with Sulzer Bros. (London) Ltd. and Crompton Parkinson Ltd.

SANTOS JUNDIAI RAILWAY, BRAZIL

3,000 Volts, 800 H.P.

Three Car Train

In collaboration with The English Electric Co. Ltd.



MODERN AIRWAYS and COMMERCIAL AVIATION SECTION

NEW LONDON HELIPORT

Enterprise of Westland

FORMAL opening by Mr. John Hay, Joint Parliamentary Secretary, Ministry of Transport, of the Westland Heliport at Battersea on April 23 brought into use the first really serious attempt to provide such facilities relatively close to Central London. There were, of course, arrangements available on the South Bank site for several years but it could hardly be said that any aura of enthusiasm surrounded them and when they were dropped in 1957 the capital was left without any proper facilities for helicopters in the central area or, for that matter, anywhere else. At this stage Westland Aircraft, Limited, stepped in and began to look for a suitable site from which it

craft park, a two-storey control tower, a single-storey building for passenger handling and administration, car parks and underground fuel storage tanks. The reinforced concrete landing platform is built over the river in the form of a T, the head of which provides a landing and take-off area of 125 ft. by 53 ft. (38.10 by 16.15 metres) capable of accepting helicopters with an all-up weight of 33,000 lb. The platform consists of 21-in. thick heavy reinforced concrete slab supported by pre-stressed concrete and steel piles driven vertically into the river bed. From the landing platform helicopters may taxi or be towed across the upright of the T which is 50 ft. (15.24 metres) long by 65 ft. (19.81 metres) wide and down a shallow ramp to the aircraft parking area where five helicopters of medium size can be accommodated without their rotor blades being folded.

An approximate differential of 18 ft. between normal high- and low-tide levels at spring tides necessitated provision of a slipway to facilitate launching a river rescue boat, an obligatory safety requirement. Running parallel with and closely adjacent to the downstream edge of the landing platform, this 130-ft. long pile supported timber-decked structure, set approximately 2 ft. above the gradually sloping surface of the river bed, connects with a stairway at the river wall face of the parking area. This slipway has the additional advantage of providing a convenient walkway in the upper half of the tidal range for passengers arriving at the site by river craft.

Flight Approaches

The flight approach path is over the River Thames and pilots must obtain clearance to enter the London control zone and comply with such other regulations prescribed by the authorities. No flying is permitted over shore areas adjacent to the heliport. Initially, the heliport is operating under private licence, which means that prior notification must be given of intention to use it. Traffic handling facilities are limited at first to daylight hours but will later be extended to cover night operation as well.

The installation, operation and maintenance of the technical facilities were entrusted to International Aeradio, Limited, and its two air traffic control officers also act as manager and deputy manager of the heliport. The equipment comprises one vhf air-ground communications channel with standby on 123.2 m/cs., telephone facilities to London Airport, Air Ministry Meteorological Office and public telephone network, internal teletalk and loudhailer systems and meteorological instruments. Refuelling facilities for both turbine- and piston-engined helicopters are provided by Shell-Mex and B.P., Limited.

Air Traffic Control

All helicopter operations will be conducted in the London control zone as VFR flights, or in instrument met. conditions on a "special VFR" clearance, at a minimum altitude of 500 ft.

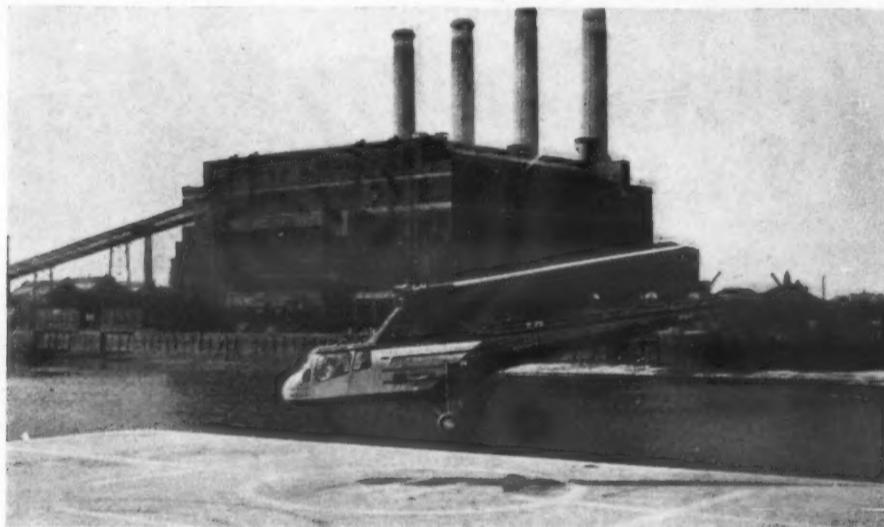


The situation of the new London Westland Heliport at Battersea

might be possible to encourage the use of this type of aircraft.

Battersea Site Approved

It had been established from past practice that penetration of the inner London area was officially permissible provided the helicopter's on route flight path at altitude was confined to the air space above the Thames, and it became necessary to establish in principle that usage of the Thames itself for actual landings and take-offs could also meet regulatory requirements. The scheme proposed by Westland was for a combined land and water heliport, and as this met with an encouraging response from both the Ministry of Transport



A Westland Wedgetail of Bristow Helicopters taking off for Knebworth. This company provides charter facilities from the new heliport

and the Port of London Authority, a small riverside site was acquired, and detailed plans were put in hand to make it operationally acceptable to all parties.

The 200-ft. square area of land selected for part of the Westland London Heliport is located on the south bank at Battersea between Battersea railway bridge and Wandsworth Bridge and 3½ miles from Hyde Park Corner. Following a public inquiry in May, 1958, when planning consent was given by the Minister of Housing and Local Government, construction of the heliport commenced last August.

Design and installation problems associated with the buildings, the water supply for fire fighting, and surface drainage, called for much consultation between interested parties and although the landing platform construction was substantially complete by the end of December, 1958, the drawings for the buildings could not be cleared until a month later.

The heliport comprises a landing platform, air-

initially, operations into the heliport will be restricted when the cloud ceiling is below 800 ft. or the visibility falls below 880 yd. All departures from the heliport will be required to file a flight plan prior to departure and, if necessary, will be given a departure clearance obtained from the London Approach Control by the heliport air traffic control unit.

A system of fixed routeings has been agreed with the M.O.T. whereby helicopters on routes to or from the west will be via Castlenau reservoirs, whilst helicopters on routes to or from the north, east or south will normally be routed via Greenwich Marshes. Castlenau reservoirs and the Greenwich Marshes will usually be the transfer of control points between London Approach Control and the heliport air traffic control unit. Two hours' prior notification of an intended landing at the heliport is at present required, but otherwise standard air traffic control procedures apply.

A fixed water-pump and hydrant installation

(Continued on page 14)

SILVER ROADWAYS LTD.

Reliable Trunk Services to all Parts

BRISTOL
8 The Grove, Bristol 1
BRISTOL 22315

CARDIFF
10 Dumfries Place
CARDIFF 21631

GLASGOW
12 Dixon Street, C.2
CITY 3381

BIRMINGHAM
323 High St., West Bromwich,
Staffs.
WEST BROMWICH 2801

SWANSEA
Exchange Buildings
SWANSEA 54171/5

LIVERPOOL
11 Old Hall Street, Liverpool, 3
CENTRAL 6326

LLANELLY
Morfa Works, Llanelli
LLANELLY 4302

TAVISTOCK
Harford Bridge
TAVISTOCK 2374

CORROSION-RESISTING ALUMINIUM ALLOY

LONDON 22-24 Bermondsey Wall West, S.E.16 BERMONDSEY 4533

Speed your freight

to and from the Continent

by

SILVER CITY ROADAIR



LONDON—PARIS

transit time 72 hours

LONDON—LILLE

transit time 96 hours

Large indivisible loads or small parcels are carried with the minimum of handling on these regular and reliable ROADAIR services. The extremely economical rates include all loading and unloading charges at Lydd (Ferryfield) and Le Touquet airports.

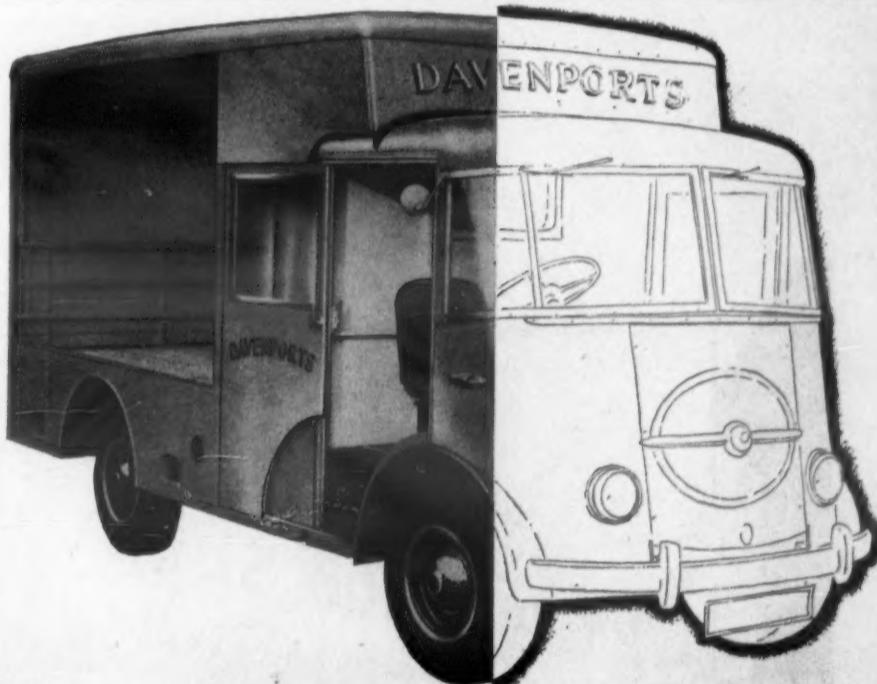
ASK YOUR FORWARDING AGENT FOR FULL DETAILS



Loading at Lydd (Ferryfield)



SILVER CITY AIRWAYS LIMITED



"Beer at home" & Birmabright



In one day a Davenports' driver will deliver beer to over 150 customers. This "beer at home" service calls for vehicles with lightness to speed them on their way, and strength and durability to stand up to the rigours of the daily rounds.

Vehicles with bodywork in Birmabright aluminium alloy are the right answer for Davenports'. Tough, light and resilient, Birmabright could be the answer to your transport problem too. Why not let us tell you more about it?

Photograph by courtesy of Hope Emery Ltd., Body Builders.

Birmabright

Registered Trade Mark

BIRMBRIGHT LIMITED · WOODGATE WORKS · BIRMINGHAM 32
RM 218

Have you seen
the NEW

Foden
K
TYPE RANGE

Foden experience, knowledge and skill now combine with the newest techniques to produce a range that is way ahead, bringing you

- LOWER PRICES
- INCREASED PAYLOAD
- GREATER POWER
- SIX TYPES OF ENGINE
- SIX TYPES OF GEAR BOX
- AIR BRAKES ON ALL WHEELS, ON ALL MODELS — and Foden PERFECTION in every detail of the specification.



London Sales Office: 139 Park Lane, W.1

FODENS LTD · ELWORTH WORKS · SANDBACH · CHESHIRE
Telephone: Sandbach 644 (12 lines)

Telephone: GROsvenor 5932

Telegrams: FODENWAY Sandbach

A35 ROAD-RAIL CONVERTIBLE

Useful Rhodesia Railways Modification

MODIFICATIONS carried out at the central workshops of Rhodesia Railways chief engineer at Bulawayo have successfully adapted an Austin A35 dual-purpose vehicle to run on road or rail and thus to make it suitable for use as a railway inspection trolley. Compared

major alteration of the suspension such as would have been necessary with a larger vehicle. As it is, when used on rail the weight of the car is carried on the existing wheels and tyres and drive is provided by the rear wheels in the normal way. The modification consists of small flanged wheels



Austin A35 utility adapted by Rhodesia Railways to run on rail and, right, a close-up of the rear-end fittings

with a conventional inspection trolley, apart from the possible value of the ability to run on road or rail, the converted Austin is said to be cheaper and also to have the additional advantages of ready delivery and availability of spares.

Choice of the type of vehicle was limited by the gauge (3 ft. 6 in.) of Rhodesia Railways and it was found that the A35 could be used without any

mounted on arms outrigger from the existing front and rear axles. The flanged wheels have 1 in. of lateral play and are for guiding purposes only, being kept in contact with the rails by means of helical springs.

At present it takes about half an hour to change over from road to rail trim or vice versa but it is expected that this time will be reduced.

New London Heliport

(Continued from page 13)

with adequate hose to reach any point of the landing area or parking apron provides for the application of water or foam. Hand fire-extinguishing equipment is installed at strategic points on the helicopter manoeuvring area and in the accommodation. Break-in gear for rescue operations is provided, together with first aid facilities. For water-rescue work a red Zodiac dinghy with an outboard motor is provided, slung on davits ready for immediate launching. The heliport fire, crash and rescue services will be supplemented by the London Fire Brigade (including fire-fighting boats), the ambulance service and the River Police.

Although floodlights are provided for the parking area, no night flying is contemplated at present, though provision has been made for landing-pad boundary lights to assist in poor weather conditions. As already indicated, the I.A.L. air traffic control staff have been provided and these will act as manager and deputy manager of the heliport and will combine their air traffic control duties with those of administering and operating all the technical facilities at the heliport. Operators, however, will be expected to co-operate as far as possible in the moving and refuelling of

their aircraft, and in the handling of passengers, baggage and freight.

With an overall cost in the region of £80,000 and a contemplated life based on a lease agreement of seven years only, it is clear that no profit is to be expected. Running costs are likely to be high, but despite this it is intended that the heliport shall as far as possible operate on a commercially economic basis. Revenue will be derived from landing and parking fees, the sale of fuel and so forth. Initially the scale of landing charges will be similar to that for an aeroplane at a Government controlled airport. This rate is based on an aircraft's gross certificated weight, and approximates to 7s. for each 1,000 lb. Factual evidence as to what extent the heliport will generate helicopter traffic flow will obviously not become available until it has been open for some time. There seems little doubt that the existence of the heliport will stimulate the interest of business houses in helicopter use, and generate new charter and possibly scheduled operation activities. We recorded in our last issue the facilities which Bristow Helicopters, Limited, is offering from the new heliport.



No problem with
AUSTIN
OMNIVAN
fitted with an 8 inch
BORG & BECK
FRICITION CLUTCH

"The Borg & Beck 8 in. diameter clutch, with a spring loaded centre, is amply proportioned to resist the continued stops and restarts involved in normal delivery work, taking up the drive smoothly under all conditions."

Report of road test by "COMMERCIAL VEHICLES"

Specialists in the Transmission of Power
FRICITION CLUTCHES—MANUMATIC SYSTEM

BORG & BECK COMPANY LTD · LEAMINGTON SPA · WARWICKSHIRE BBC/9

SOCIAL AND PERSONAL

Traffic Engineering Studies

THE University of Birmingham is being offered a gift under covenants of between £19,000 and £20,000 a year for seven years to enlarge and develop its graduate school of highway engineering to include traffic engineering and to establish a chair in the joint subjects. Part of the gift is intended for the provision of bursaries for graduates taking courses in the school. The offer is shortly to be formally submitted to the senate and the council of the university. The interests included in this offer represent the motor industry, certain oil companies, a group of civil engineering and surfacing contractors, the Automobile Association, the Royal Automobile Club, Lloyd's, and the British Insurance Association.

* * *

Mr. K. Wickham, Ruston and Hornsby export manager for Australasia and Far Eastern Territories, left the U.K. on April 20 for a 16-week business tour of the Far East.

* * *

Mr. F. G. Culling, who has been appointed commercial manager, New Zealand Government Railways, joined the railway service in 1921 as a cadet at Christchurch, and subsequently served at vari-



Mr. F. G. Culling

ous South Island offices and stations, chiefly in Otago and Southland. In 1941, after two years as stationmaster at Kingston, he was transferred to the traffic manager's office at Invercargill, where he undertook duties associated with the Department's commercial activities. Experience in this field led to his appointment in 1944 as commercial agent at Invercargill. He later occupied a similar post at Dunedin, and at the beginning of last year was promoted to the position of assistant commercial manager at Wellington.

* * *

Transad News, the monthly magazine issued by British Transport Advertising, the commercial advertising service of the British Transport Commission, has been placed top of its class in the 1959 National House Journal Competition—the results of which have just been announced.

* * *

Mr. A. E. (Dick) Walters, well known in the commercial vehicle trade, joins Boden Trailers, Limited, Royton, near Oldham, as sales manager, to market its new range of semi-trailers. Mr. Walters was formerly general sales manager for Anthony Hoists, Limited.

* * *

The honour of Knight of the Order of the Garter has been bestowed by H.M. the Queen as her personal gift on Field-Marshal Sir William Slim, former member of the Railway Executive, thereafter Chief of the Imperial General Staff, and Governor-General of Australia since 1953.

* * *

Cords Piston Ring Co., Limited, announces that Mr. E. Tunner, managing director of the company since its incorporation in 1937, relinquishes the management at the end of April. He remains a director of the company. Mr. D. H. Piper, the sales manager, is appointed managing director.

* * *

Mr. R. W. Mitchell who, as announced in our last issue, is retiring as London parcels area manager, B.R.S., has been 50 years in that sphere of road transport, having joined Carter Paterson and Co., Limited, in 1909.

He served with the army during the 1914-18 war and was mentioned in despatches. After being employed at a number of depots in the London area he became traffic manager of Carter Paterson in 1935. For a period he was general manager, and a director, of City and Suburban Carriers, Limited, following its acquisition by Carter Paterson. In 1942 he was seconded to R.A.F. Maintenance Command in an advisory capacity but later the same year became North Western area manager for Carter Paterson, with responsibility in this capacity as from 1946 for the Carter Paterson and Pickfords Joint Parcels Service. In 1947 Mr. Mitchell was appointed London area manager of the joint service. Subsequently he served as assistant to the chief parcels manager and as traffic manager and deputy chief parcels manager before taking up his present appointment in 1950.

* * *

The annual dinner of the Railway Correspondence and Travel Society was held in London on April 25 and was presided over by Mr. R. D. Goddard, chairman of the Society. Mr. Eric Palmer, hon. secretary of the Northampton branch of the R.C.T.S., proposed the toast "British Railways" and Mr. R. F. Hanks, chairman of the Western Area Board of the British Transport Commission, replied with a brief outline of the Commission's task in modernising and streamlining the railway system. "The Railway Correspondence and Travel Society" was proposed by Mr. Charles F. Klapper, Editor of MODERN TRANSPORT, and Mr. R. D. Goddard responded. Mr. H. C. Creamer, hon. treasurer of the R.C.T.S., proposed "The Ladies and Visitors," to which responses were made by Mr. J. R. Anning, chairman of the Model Railway Club, and by Miss Gillian Forster.

Chairman of London Transport

IN the House of Commons on April 24, the Minister of Transport, Mr. H. Watkinson, announced that, after consultation with the chairman of the British Transport Commission, he had decided to appoint Mr. A. B. B. Valentine to be chairman of the London Transport Executive in succession to Sir John Elliot, who is retiring on June 30. Upon the announcement Sir John Elliot said: "This is a fine appointment. The combination of my old friend Alec Valentine, a product of London Transport and a past president of the Institute of Transport, and Arthur Grainger, my deputy-chairman, who is also now to be managing director, will ensure to London Transport the strongest and most experienced leadership possible in the testing times ahead. Londoners can feel sure that their travel problems will be in good hands."

* * *

Mr. K. J. Cook, O.B.E., chief mechanical and electrical engineer, Eastern and North Eastern Regions, B.R., is to retire on June 30.

* * *

Mr. Michael S. Brander has been appointed manager Russia, of British European Airways and is now in Moscow in readiness for the opening of the new B.E.A. London—Moscow air service on May 14.

* * *

Mr. J. A. Barke has been appointed director of product divisions for the Ford Motor Co., Limited, in which capacity he will be responsible to the managing director for all sales activities, covering cars, vans, trucks, tractors and parts. Mr. H. H. Jeffries as director of manufacture will be responsible to the managing director for all manufacturing activities in the body, chassis, assembly and hot metal groups.

* * *

Mr. B. R. Temple, district commercial manager, Dundee, Scottish Region, B.R., retired on April 30. He commenced his railway career in 1912 at Bedale on the North Eastern Railway but served with the King's Royal Rifle Corps for four years during the 1914-18 war. In 1926 he went to the goods manager's office at York. In 1939 Mr. Temple became headquarters inspector at York, in 1943 he took up the post of chief clerk in the district goods and passenger manager's office, Peterborough, and in 1944 he was appointed assistant district goods and passenger manager, Peterborough. He went to Glasgow in 1946 as head of the development section, goods manager's office, L.N.E.R., and in 1949 became head of the freight revenue section of the Scottish Region. In 1950 he was appointed development assistant to the commercial superintendent, and in 1952 he took up his present position.

* * *

Mr. B. R. Temple

Mr. B. R. Temple

We record with regret the death of Mr. R. T. Smith, M.I.Mech.E., M.I.R.T.E., a director and general manager of H. Pye and Son, Limited, and other companies in the Pye Transport and Warehousing group.

* * *

Mr. J. H. Fraser, O.B.E., chief signal engineering officer, British Railways Central Staff, has been redesignated chief signal engineer. Two additional appointments to the chief signal engineer's department of the British Railways division, are announced: Mr. E. A. Rogers, assistant signal engineer (modernisation), Eastern Region, has been appointed assistant signal engineer (modernisation) and Mr. D. S. Jevell, divisional signal engineer, London Midland Region, Manchester, has been appointed assistant signal engineer (general).

* * *

Mr. A. F. Walton, M.Inst.T., who is appointed London parcels area manager, South Eastern Division, B.R.S., was in the service of the Great Western Railway from 1922 until 1935 when he joined Pickfords, Limited, as an assistant accountant, later to become deputy chief accountant. On the formation of the Carter Paterson and Pickfords Joint Parcels Service in 1946 he was appointed co-ordination assistant to the parcels manager and subsequently operations manager. In 1948 Mr. Walton was appointed operations officer (parcels) at the headquarters of British Road Services and held this post until 1955 when, on the formation of B.R.S. (Parcels), Limited, he became operations manager. He is a committee member of the Metropolitan section of the Institute of Transport.

* * *

Mr. C. J. Palmer has been appointed managing director of U.S. Rubber International (Great Britain), Limited, as successor to Mr. R. D. Hunt, who at the beginning of the year became deputy managing director of the North British Rubber Co., Limited. U.S. Rubber International in London handles the exports of the Scottish firm.

* * *

Mr. J. R. Barker, commercial manager, New Zealand Government Railways, has retired on superannuation at the conclusion of 40 years' service. His successor is Mr. F. G. Culling, formerly assistant commercial manager. Mr. Barker began his career in the railways as a clerical cadet at Wellington. He served at various North Island city and country stations, and in 1936 entered the district traffic manager's office at Auckland. Between 1939 and 1944 Mr. Barker was engaged in tariff duties, and in the latter year was promoted to the position of commercial agent at Auckland. He gained extensive experience of the department's commercial activities in the busy Auckland railway district, and in 1953 was appointed commercial manager.



ROCKSIL

rock wool for heat conservation or cold storage

insulation has special advantages for the makers of railway rolling stock, both passenger and freight. Chief among them is its unique combination of consistency with resilience.

this means

easier fitting

Insulation is packed in under 'gentle compression'.

Loose infill expands to fill spaces.

resistance to shakedown

Long-staple fibres remain in position, will not shake down. Impact or deformation of large areas (e.g. wagon sides) is absorbed.

ROCKSIL

ROCK WOOL INSULATION

In bonded slabs of various densities. Write for information:

THE CAPE ASBESTOS COMPANY LTD

114 & 116 PARK STREET W.I GROSVENOR 6022

Glasgow: Hobden Street, Petershill Road, Glasgow N.1 Springburn 6144
Manchester: Floor D, National Buildings, St. Mary's Passage, Manchester 3 Deansgate 6016-7-8
Birmingham: 11 Waterloo Street, Birmingham 2 Midland 6665-6-7
Newcastle: 19 & 20 Exchange Buildings, Newcastle 20488

TA 1792

SUBSCRIPTION RATES

BRITISH ISLES	35s.	Per annum
CANADA	32s. 6d.	
ELSEWHERE OVERSEAS	35s.	

THE PUBLISHER

MODERN TRANSPORT, 3-16 WOBURN PLACE, LONDON, W.C.1



GLYN, MILLS & CO.

BANKERS

67 LOMBARD STREET, LONDON, E.C.3

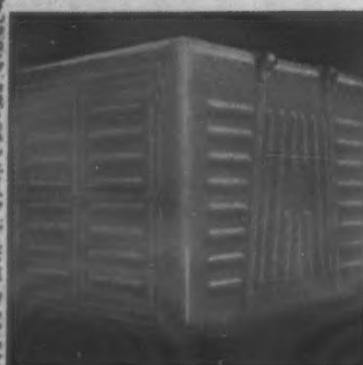
Associate Banks

THE ROYAL BANK OF SCOTLAND

WILLIAMS DEACON'S BANK LIMITED

PLASTICS CONTAINERS

* LIGHT
* STRONG
* VERSATILE



Illustrated is a 270 cu. ft. container with 5 ton carrying capacity. Virtually pilfer proof, these containers need no painting—no maintenance—are light in weight and extremely strong. Among our other products are Willerbins, for the transport or storage of coarse powders and corrosive materials. Please write for further details.

WILLERBY

Plastics

ENQUIRIES INVITED FOR ALL TYPES OF GLASS REINFORCED POLYESTER RESIN PLASTICS

WILLERBY PLASTICS
MAIN STREET, WILLERBY, E. YORKS
TEL. KIRKELLA 57901

A train 300 miles long

In the last eight years, Pressed Steel have produced enough railway rolling stock to make a train over 300 miles long. Rolling stock of all types, for all gauges, at home and overseas. You see some of these wagons and carriages opposite.

Clearly, Pressed Steel have enormous productivity. Their record shows it. But what the figures do not show is the store of experience built up by our designers and engineers over the last 300 miles of rolling stock. At Pressed Steel we use this experience to make sure that each wagon we produce is a sound engineering job, that it is produced as economically as possible, and in an absolute minimum of time. And we use this experience in intensive research, which will enable us to play our part in developing new and better carriages and wagons in the future.

PRESSED STEEL COMPANY LIMITED



RAILWAY DIVISION, PAISLEY, SCOTLAND.
London Office: RAILWAY DIVISION,
47 VICTORIA STREET, LONDON, S.W.1
Head Office: COWLEY, OXFORD.

Manufacturers also of motor car bodies,
Prestcold refrigeration equipment and
pressings of all kinds.

IMPORTANT CONTRACTS

Popular Gamecock

PROVING popular with local authorities is the new Karrier Gamecock, a quotation for 22 of which made by Cox and Co. (Leeds), Limited, has been accepted by Leeds City Council. The vehicles include 16 Gamecocks with 10 cu. yd. refuse collector bodies and four with 12 cu. yd. bodies, all of which are fitted with double cabs. The remainder are Gamecock chassis-cabs which will be fitted with gully-emptying bodies by the Yorkshire Patent Steam Wagon Co., Limited.

Hull Orders Atlanteans

Kingston-upon-Hull Corporation Transport Department is the latest of many British transport undertakings to place orders for the rear-engined Leyland Atlantean double-deck bus, with an order for five. Previous orders for the Atlantean total over 480 buses valued at over £1 million.

B.R. Boats Have Dunlop Liferafts

Two well-known B.T.C. steamers operated by British Railways are being equipped with Dunlop inflatable liferafts. They are the *Hibernia* and the *Cambria*, which sail between Holyhead and Dun Laoghaire. Both will carry 12 of the company's 20-man Seafarer rafts.

Decca Navigator for Persian Gulf

The Decca Navigator Co., Limited, announces that the Persian Gulf Lighting Service has placed an order for the supply and erection of two Decca Navigator chains in the Persian Gulf. These are planned to be operational by the end of this year and will provide a continuous navigational service as in many other parts of the world.

Chiswick Works Development

London Transport has placed contracts with Holland and Hannen and Cubitts (Gt. Britain), Limited, for the erection of a new central laboratory at Chiswick Works, and with Matthew T. Shaw and Co., Limited, London, E.14, for alterations and additions to steelwork in connection with the reorganisation of Chiswick Works and consequent rebuilding work (stages 4-7).

More Differential-Drive Trolley Locomotives

The Hunslet Engine Co., Limited, on behalf of Hunslet Taylor Consolidated (Pty.), Limited, Johannesburg, has placed a repeat order with Crompton Parkinson, Limited, for 16 traction motors for differential-drive trolley locomotives, and also a development order for 12 traction motors for differential-drive trolley locomotives for the Mafulira Copper Mines, Limited, and the Mindola Shaft of the Rhokana Corporation.

Road Vehicles by Charles Roberts

Charles Roberts and Co., Limited, Horbury Junction, Wakefield, this week is delivering the company's first ever road tank vehicles, which are being supplied to the order of Walkers (Century Oils), Limited, Hanley. The vehicles are four-compartment tankers, mounted on Ford Thames Trader chassis, for the conveyance of 1,800 gal. of mineral oil. This well-known railway rolling stock manufacturing concern also announces that it is developing a prototype vehicle of the company's own design, full details of which will be available shortly.

SHIPPING and SHIPBUILDING

Flood of New Tanker Tonnage

SHIPYARDS throughout the world at present have on their books orders for tanker tonnage equal to about half the carrying capacity of the existing world tanker tonnage, it is noted in the annual statement by the chairman of the Shell Transport and Trading Co., Limited. Moreover, in 1958, with more companies entering all phases of the business, there was a considerable potential of additional oil available over and above even high levels of demand. In 1959 it can be expected that a similar position of potential oversupply will continue, and the easy position in tanker tonnage is likely to persist during the year, says Lord Godber. An upsurge in demand for tankers sufficient to absorb such an increase in available tonnage would be quite without precedent in normal conditions. During the year the group, in common with other oil companies, found it necessary to lay up a number of its older ships and to absorb marginal fluctuations in demand by operating others at reduced speed.

St. Lawrence Seaway Open

THERE was a minimum of ceremony attending the bringing into use on Saturday, April 25, of the St. Lawrence Seaway. Two Canadian Government icebreakers left Montreal at the head of a convoy of 68 Great Lakes and ocean cargo ships. It has been estimated that the new seaway will open the Great Lakes to 80 per cent of world shipping. The first ocean-going ship to berth in Toronto, on Lake Ontario, did so early on Monday morning, having transited the seaway proper, from Montreal to Kingston, Ontario, in just under 30 hours.

"Ile de France" to be Sunk

BY arrangement with the Japanese scrap merchants who have bought her, the former C.G.T. liner *Ile de France* is to be sunk to add realism to a Hollywood film, *The Last Voyage*, to be filmed in Japan, it is reported. The idea is to sink the *Ile de France*, which made her last transatlantic crossing last November after 33 years' service, in shallow water and salvage her later for scrap. But a C.G.T. spokesman has said in New York that the line would fight to save the liner from such "an undignified end." Under the new agreement the film company must sail the *Ile de France* on her final voyage under a fictitious name. She must neither fly the French flag nor be identified with the French Line.

Fire System Uses Ventilator Trunks

IN the conversion of the motor ship *Degema*, owned by Elder Dempster Lines, Limited, to which has been fitted a Pyrene-E.D.-Hol inert gas fire-extinguishing installation for the protection of her ten cargo spaces, use was made of the vessel's mechanical ventilation system, whereby the inert gas is discharged into the cargo spaces through the supply and exhaust trunking, thus saving the cost of an independent pipe system for this purpose. The installation incorporates an inert gas generator unit capable of producing 35,000 cu. ft. of inert gas per hour. Means are also provided for discharging the inert gas into the engine room. This installation has been designed to meet the requirements of the Ministry of Transport.

TENDERS INVITED

THE following items are extracted from the Board of Trade Special Register Service of Information. Inquiries should be addressed, quoting reference number where given, to the Export Services Branch, Board of Trade, Lacox House, Theobalds Road, London, W.C.1.

May 9—Ethiopia.—Imperial Highway Authority for six diesel lorries of 29,000 lb. or more g.v.w. with front-mounted p.t.o.-driven 20,000-lb. winch. Tenders to the Imperial Highway Authority, P.O. Box 1770, Addis Ababa. (ESB/9000/59.)

May 11—Pakistan.—International Co-operation Administration for one 24-ton six-by-six petrol-engined LOREY and four 4-ton two-wheeled TRAILERS with canvas tops. Tenders to the Director-General, Department of Supply and Development, Frere Road, Karachi. (ESB/8717/58/ICA.)

May 11—Portuguese East Africa.—Ports, Railways and Transport Department for 5,000 pairs of FISHPLATES for 30-kg./m. low-section rails. Tenders to the Ports, Railways and Transport Department, Lourenco Marques. (ESB/7932/58.)

May 12—Ceylon.—International Co-operation Administration for three petrol-engined BORRIES of 7,500 lb. g.v.w. with p.t.o.-driven winch and front and rear towing hooks. Tenders to the Chairman, Tenders Board, Ministry of Lands and Land Development, Box P.O. 500, Colombo, 1. (ESB/7409/59/ICA.)

May 12—New Zealand.—Whangarei Harbour Board for one industrial TRACTOR, two 5-ton capacity TRAILERS, 10 2-ton capacity TRAILERS and two FORK-LIFT TRUCKS of 3,000-lb. and 4,000-lb. capacity respectively. Tenders to the Chairman, Whangarei Harbour Board, Whangarei. (ESB/9200/59.)

May 13—Iraq.—General Council of Kirkuk for 30 left-hand-drive diesel-engined single-deck BUSES. Tender form and specifications from the Accountant of the Local Authorities of Kirkuk Liwa, or from Iraqi Embassies or Legations abroad for I.D.10. (ESB/9419/59.)

May 13—Ethiopia.—Imperial Highway Authority for two DIESEL CRAWLER-TRACTORS fitted with 2.2 cu. yd. front-end buckets. Tenders to the Imperial Highway Authority, P.O. Box 1770, Addis Ababa. (ESB/9001/59.)

May 16—Ceylon.—Ceylon Transport Board for 1,400 DIESEL-ENGINESED BUS CARRIAGES 800 about 90 b.h.p., 500 of 60 b.h.p. and 100 of 50 b.h.p., to cover requirements until 1963. Photo copies of tender documents from Export Services Branch, B.O.T. Price 12s. (ESB/10293/59.)

FINANCIAL RESULTS

NOTES on the trading results, dividends and financial provisions of companies associated with the transport industry are contained in this feature, together with details of share issues, acquisitions and company formations or reorganizations.

de Havilland Holdings

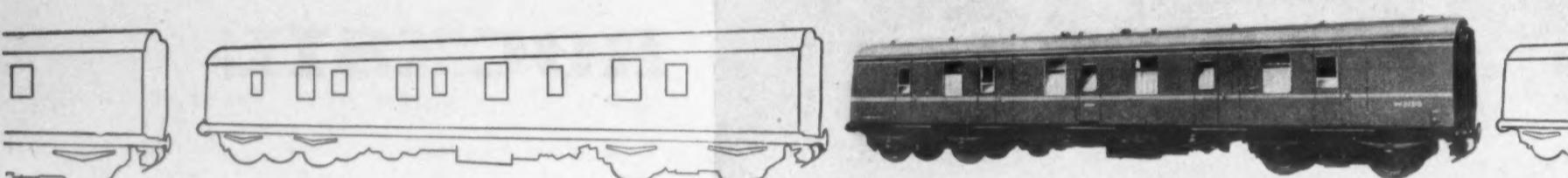
For the year ended September 30, 1958, the accounts of de Havilland Holdings, Limited, showed a group surplus of £383,775 (£1,544,415). Net profit was £133,606 (£619,611). Dividend on ordinary is nil (7½ per cent).

G. D. Peters

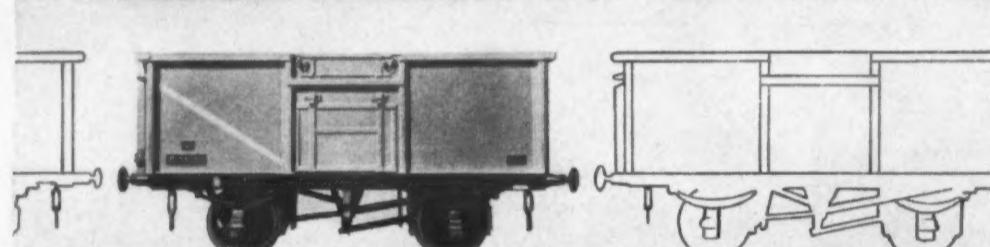
Mr. A. Dowie, the chairman of G. D. Peters, Limited, reports that during 1958 the continuous braking programme for British Railways freight wagons was drastically curtailed and the production of vacuum brakes for British Railways by the subsidiary came to a standstill by the end of the year. Negotiations for a vacuum brake manufacturing programme for 1959 are still in progress and though nothing definite as yet has been decided present indications are that any orders from this source will be on a very much reduced scale. Net profit for 1958 was £101,686 (£124,988) and dividend 10 (7½) per cent.

Canadian Eagle Oil

N.V. Koninklijke Nederlandse Petroleum Maatschappij (Royal Dutch Petroleum Company) and the "Shell" Transport and Trading Co., Limited, have made a proposal to the Canadian Eagle Oil Co., Limited, to acquire its entire assets and business. The consideration offered is the allotment to Canadian Eagle, for distribution in kind to its shareholders of 3,971,012 fully paid 20-guilder shares of Royal Dutch Petroleum and 5,956,518 fully paid 1/2-guilder shares of "Shell" Transport and Trading Batavia Petroleum Maatschappij N.V., a company of the Royal Dutch-Shell group which owns approximately 21 per cent of the issued share capital of Canadian Eagle. Canadian Eagle shareholders owning the remaining 23,826,071 shares will therefore receive two Royal Dutch and three "Shell" Transport shares in respect of every 12 shares of Canadian Eagle held. Canadian Eagle has long been closely associated with the Royal Dutch-Shell Group in the joint ownership of companies and enterprises in the United Kingdom and Eire, and in Latin America. The purpose of the proposal is to effect a complete amalgamation of these interests.



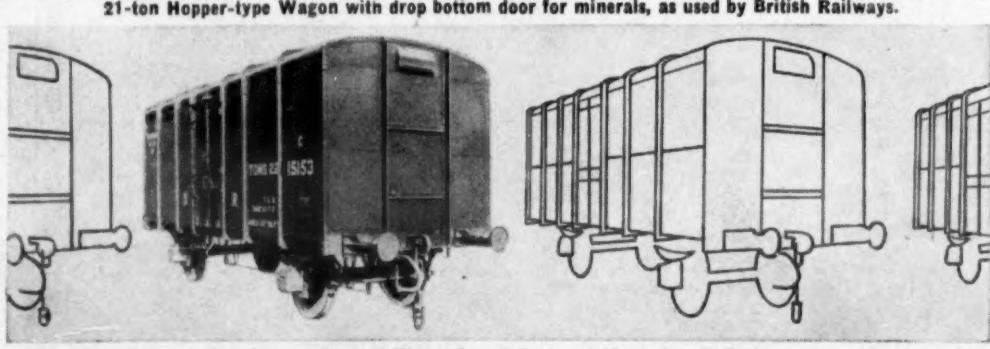
The 58-foot Gangwayed Standard Brakevan, supplied by Pressed Steel to British Railways.



16-ton all steel Mineral Wagon. 72,000 of these have already been delivered from our Paisley works.



21-ton Hopper-type Wagon with drop bottom door for minerals, as used by British Railways.



Broad-gauge Covered Wagon type C.R., as used by Indian Railways.